AFSWC-TDR-63-21

STATIC STABILITY TESTS ON A 0.098 SCALE STANDARD LAUNCH VEHICLE (SLV)-1B WITH 4-SQUARE-FOOT FIN AREA

TECHNICAL DOCUMENTARY REPORT NO. AFSWC-TDR-63-21

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Test Directorate
AIR FORCE SPECIAL WEAPONS CENTER
Air Force Systems Command
Kirtland Air Force Base
New Mexico

Project No. 620-850B-7043

(Prepared under Contract No. AF 29(601)-5603
by C. E. Ziegler, Vought Aeronautics, Division
of Chance Vought Corporation, Dallas, Texas.)

HEADQUARTERS
AIR FORCE SPECIAL WEAPONS CENTER
Air Force Systems Command
Kirtland Air Force Base
New Mexico

ABSTRACT

The purpose of the tests performed in the Chance Vought high-speed wind tunnel was to obtain force data to evaluate the static stability characteristics of the SLV-1B with 4-square-foot fins.

The model was instrumented with a six-component internal strain gage balance and two base pressure probes to determine the forces on the model. The model was then placed in the tunnel and tested in the Mach number range of 0.6 through 5.0, and a Reynolds number range of 6 million/ft. to 20 million/ft. The model attitude was varied from -10 to +10 degrees in the pitch plane.

The results obtained were force and moment data in the body axes; these results are presented in tabulated form with selected coefficients presented in plotted form.

PUBLICATION REVIEW

This report has been reviewed and is approved.

ALBERT L. HALEY
Colonel USAF
Director, Test Directorate

JOHN J. DISHUCK
Colonel USAF
DCS/Plans & Operations

CONTENTS

1. INTRODUCTION.

This report presents data obtained from tests in the Chance Vought high-speed wind tunnel on a 0.098 scale model of the Standard Launch Vehicle (SLV)-1B with 4-square-foot fins. The test was conducted during the period from 16 October through 20 October 1962. Results are presented in tabulated form with selected coefficients presented in plotted form. A data analysis presentation is also included in section 8.

The model consisted of the same basic parts as the Scout Derivative Model (reference 1). The only changes were in the nose shape and the fin location. Tests were run on the complete body and also on the second stage. Provisions were included for the removal and adjustment of the fins. There were no fins on the second stage.

2. SUMMARY.

a. General information.

High-speed wind tunnel test No.	89
Customer's test designation	None
Test dates	16-22 Oct 1962
Model	Standard Launch Vehicle-1B
Model scale	098
Test dynamic pressure	900-2500 psf
Mach numbers	0.6, 0.8, 1.0, 1.2, 2.0, 3.0, 4.0, 5.0
Test Reynolds number	6 million/ft. to 20 million/ft. nominal
Test authorization	Contract No. AF 29(601)-5603
Occupancy hours	21 hrs. 9 min.
Number of runs	29
Customer representative	D. E. Poucher
Wind tunnel test engineer	C. E. Ziegler

b. Test objectives.

To determine the static stability characteristics of the model in the Mach number range of 0.6 to 5.0.

3. NOMENCLATURE.

Forces and moments tending to produce a climbing right turn, clockwise roll maneuver are positive. Directions assume the model to be at $\varphi = 0$ and the observer to be viewing upstream.

Coefficient data are presented in the body and stability axes.

PNT		Data sequence number, (card number)	
ALPHA		Angle of attack in the pitch plane of the model, corrected for deflection, positive nose up.	degrees
N	C_N	Normal force coefficient, body axes	$\frac{\text{normal force}}{qS}$
PM	C_m	Pitching moment coefficient, body axes	$\frac{\text{pitching moment}}{qSc}$
Y	C_Y	Side force coefficient, body axes	$\frac{\text{side force}}{qS}$
YM	C_n	Yawing moment coefficient, body axes	$\frac{\text{yawing moment}}{qSb}$
RM	C_l	Rolling moment coefficient, body axes	$\frac{\text{rolling moment}}{qSb}$
A	C_A	Axial force coefficient corrected to the equivalent of free stream static pressure acting on the base body axes	$C_{AU} - C_{AB}$
AU	C_{AU}	Axial force coefficient as recorded uncorrected for base pressure effects	$\frac{\text{axial force}}{qS}$
AB	C_{AB}	Axial force coefficient due to base pressure	$\frac{(P_B - P_S) S_B}{qS}$
L	C_L	Lift force coefficient, stability axes	$\frac{\text{lift force}}{qS}$
D	C_D	Drag force coefficient corrected to the equivalent of free stream static pressure acting on the base, stability axes	$\frac{\text{drag force}}{qS}$

CP	Center of pressure, positive upstream, inches from sta 25.5 for B_3 configuration and 14.1 for B_4 configuration	$\frac{C_m(c)}{C_N}$
TO	Free stream stagnation temperature	degrees Rankine
Po	Free stream stagnation pressure	psia
PS	Free stream static pressure	psia
Q q	Free stream dynamic pressure	psf, psi
M	Free stream Mach number	
RN/L	Reynolds number per foot	
S	Reference area, sq. in.	7.2576
c	Reference length, in.	3.038
b	Reference length, in.	3.038
S_B	Base pressure correction area, sq. in.	4.909 (B_3) 4.909 (B_4)

Body nomenclature

B_3	Complete body less fins
B_4	B_3 less first stage
F_2	Fins
Δ_F	Fin cant angle

4. DESCRIPTION OF FACILITY.

The Chance Vought Corporation high-speed wind tunnel is an atmospheric-exhaust, blow-down tunnel with a 4- by 4-foot test section size. The Mach number range of the tunnel is from 0.5 to 5.0. Air is stored in six tanks, with a total volume of 28,000 cubic feet, at a maximum pressure of 600 psia and a nominal temperature of 100 degrees Fahrenheit.

The circuit utilizes both supersonic and transonic test sections, each 4 by 4 feet in cross section and slightly over 5 feet long. For supersonic operation

a single-peak variable diffuser is placed downstream of the supersonic test section. For transonic operation the variable diffuser is removed from the circuit and replaced with a porous-wall, transonic-test section with 22 percent wall porosity. The transonic plenum is pumped by ejector action of the main tunnel airstream acting on controllable ejector flaps located downstream of the test section. Adjustable choking flaps, also located downstream of the test region, are utilized for subsonic Mach number adjustment. Figure 1 shows the general tunnel arrangement and identifies various areas within the facility.

5. MODEL AND INSTRUMENTATION.

The model tested was a 0.098 scale model of the Standard Launch Vehicle-1B with 4-square-foot fins. The model consisted of two basic bodies and two tail configurations. One body configuration was the second stage of the missile and was approximately 25 inches long. The other body configuration was the second stage with a first stage added to give it a total length of 49.09 inches. The fins were the same as those used on the Scout Derivative model described in reference 1. One set of fins had zero incidence angle and the other set had 3 degrees incidence angle to produce positive roll. Figures 2 and 3 show the installation of the two body configurations in the tunnel. Figure 4 shows the dimensions of the two bodies and the fins, and the orientation for each component.

Model forces were measured by the VB-13 six-component internal strain gage balance mounted on sting configuration number 1 with sting extension CVS54377 (reference 2). Figures 5 and 6 show the general arrangement and identify the sting sections. Two static pressure probes were located in the cavity of the body to measure base pressure. Each probe was connected to a separate pressure transducer to provide a backup system.

In addition to force balance and base pressure transducer outputs, tunnel parameters were also recorded. These parameters consisted of angle of attack, stagnation and static pressures, and stagnation temperature.

6. TEST PROCEDURES.

Preliminary preparations for the test included calibration of the VB-13 balance and the base pressure transducers. The sting and extension were

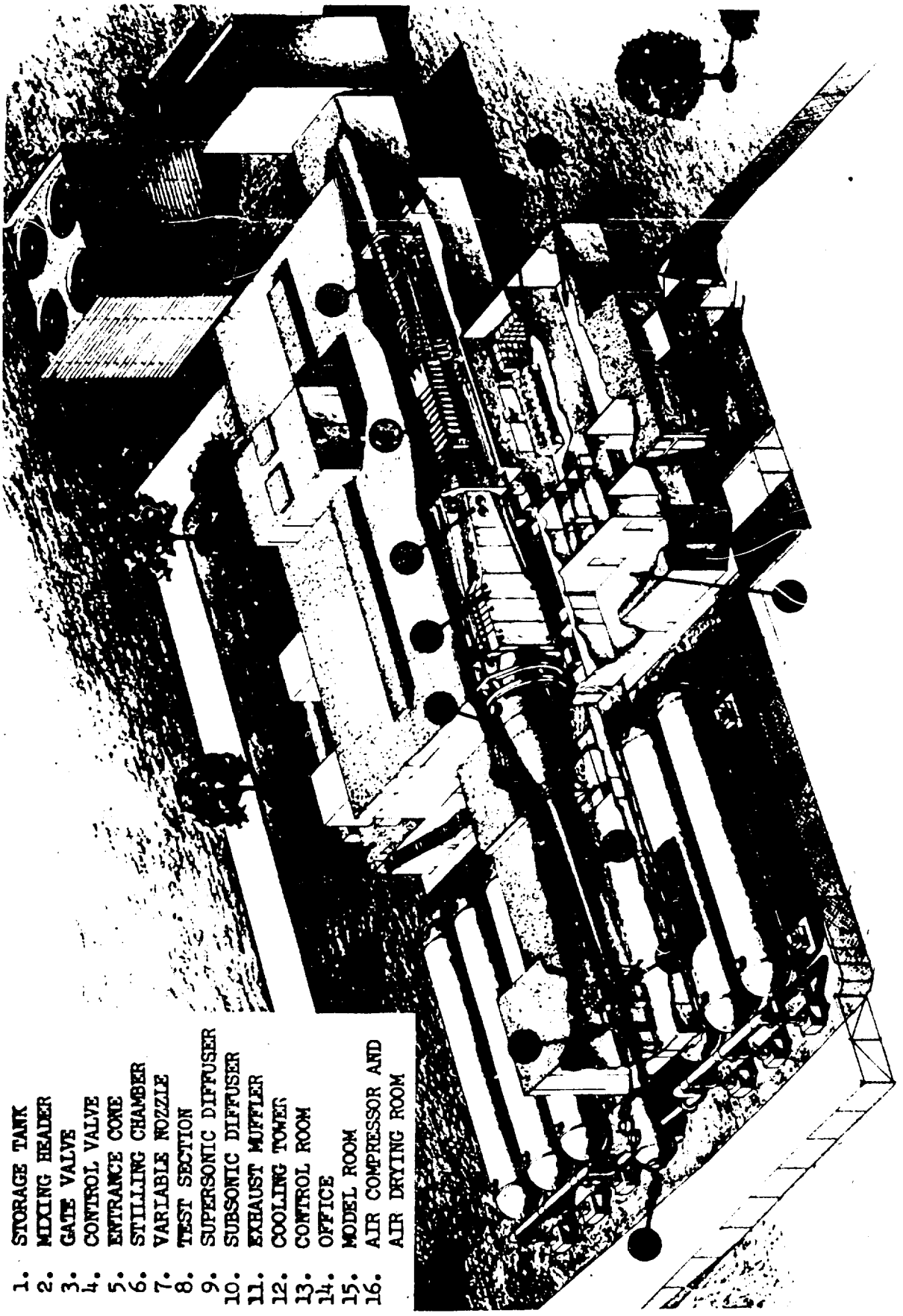


Figure 1. Chance-Vought high-speed wind tunnel.

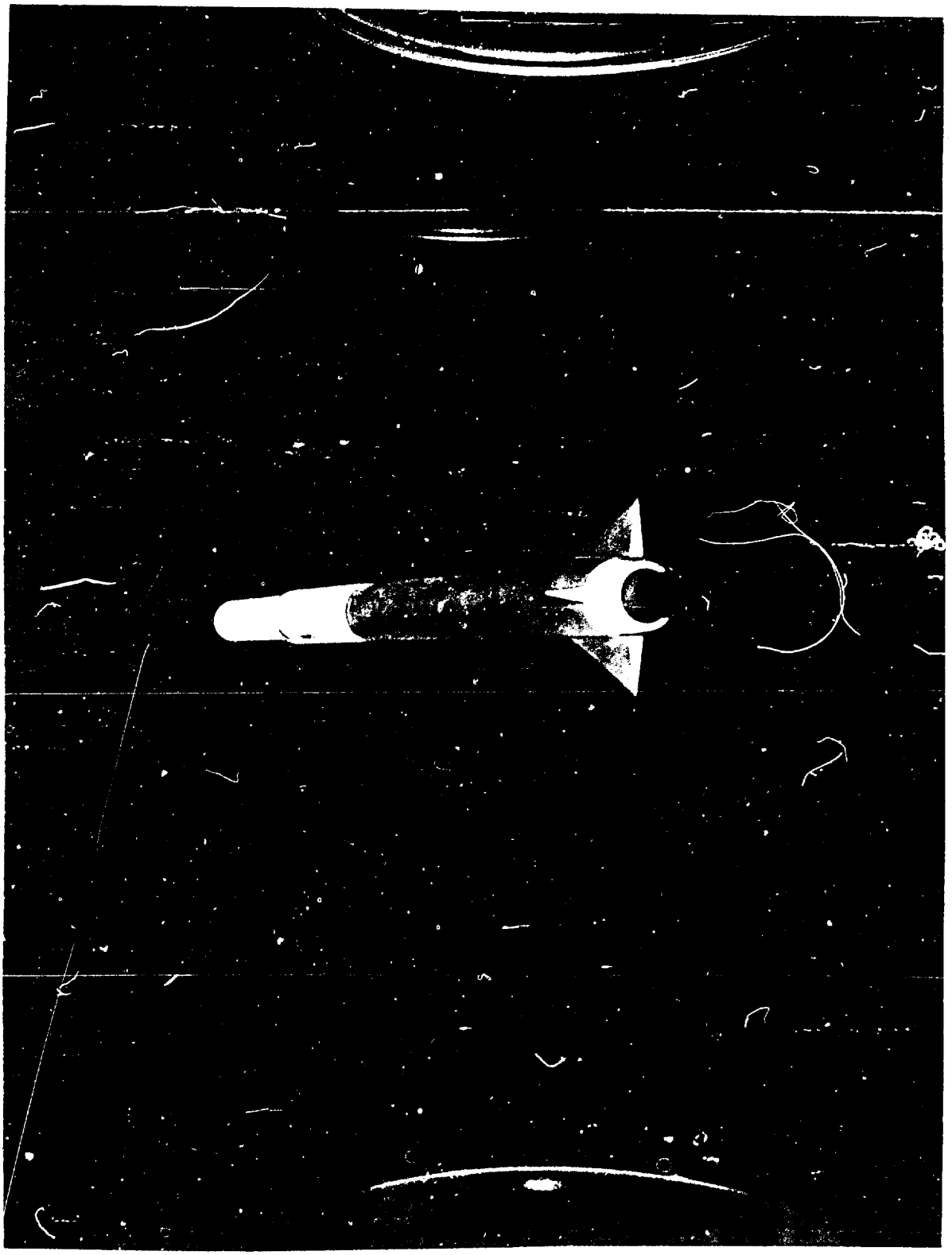


Figure 2. SLV-1B Model mounted in tunnel.

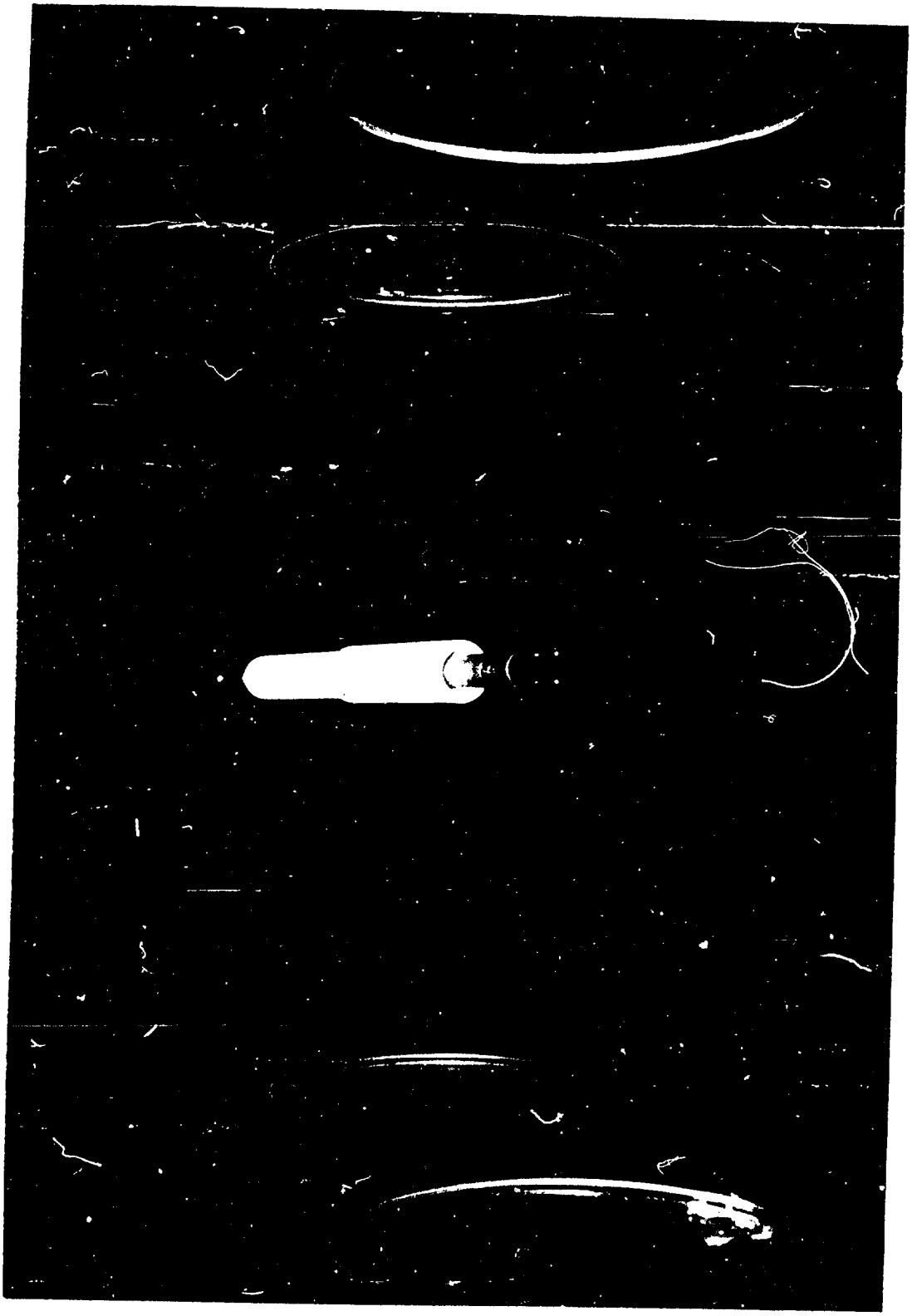
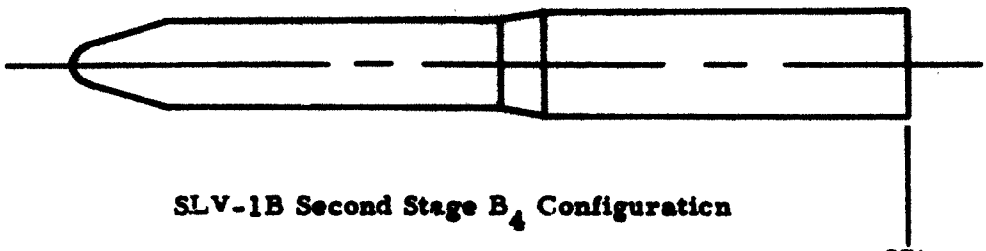


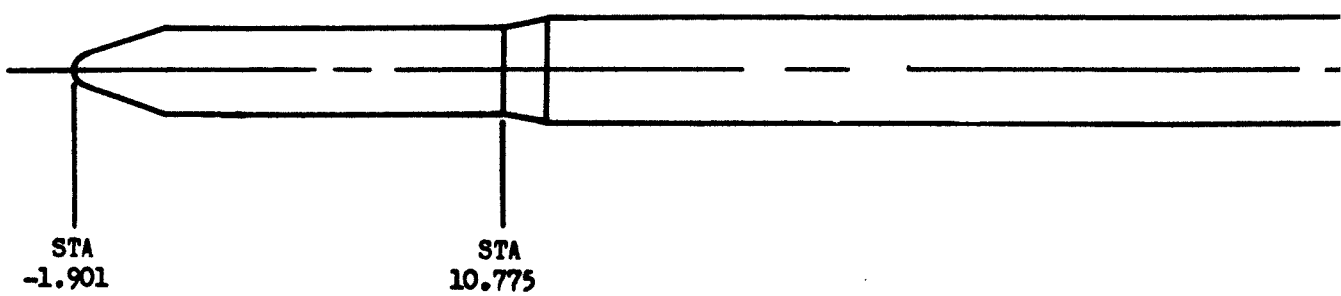
Figure 3. Second stage of SLV-1B mounted in tunnel.



SLV-1B Second Stage B_4 Configuration

STA
22.491

SKETCH OF THE SLV-1B MODEL



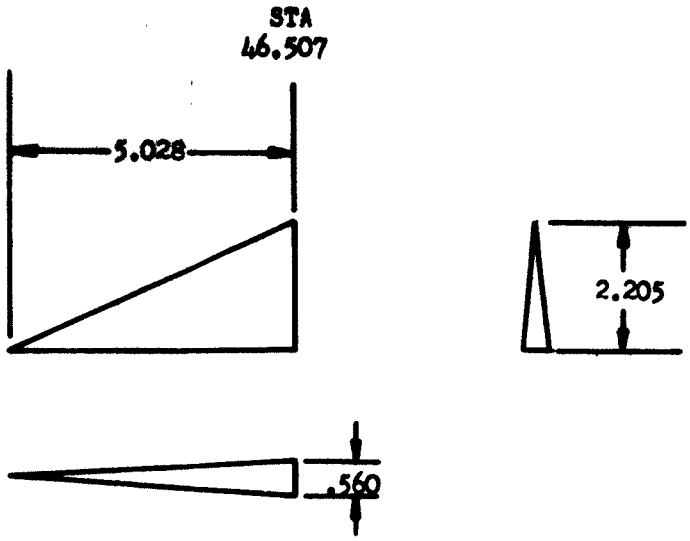
STA
-1.901

STA
10.775

SLV-1B B_3F_2 Configuration

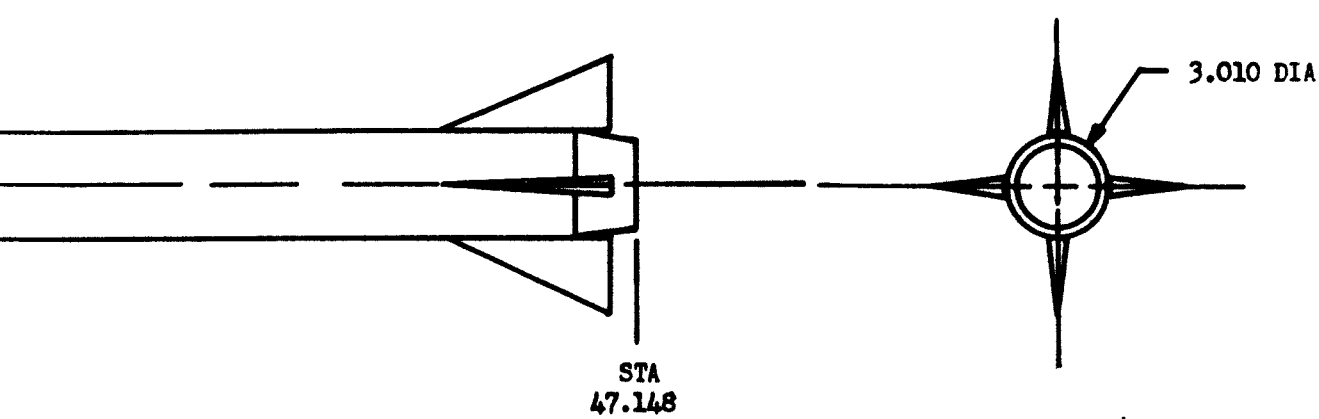
[redacted]

Figure 4. Dimensions of model.



SLV-1B F_2 Fins

Note: The fin with the 3 degree cant angle is the same as the fin above except it is aligned at a 3 degree angle with the body axes.



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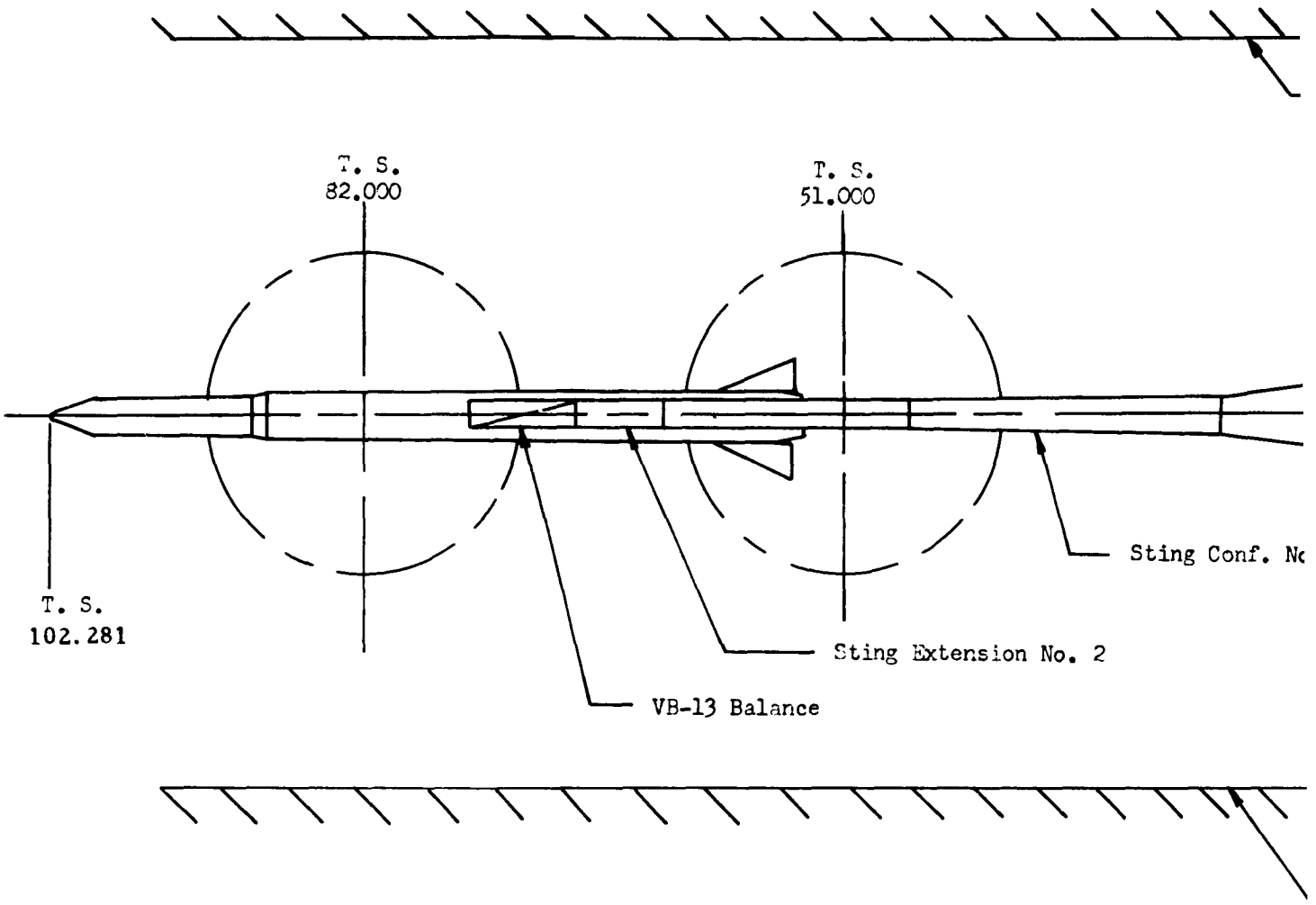
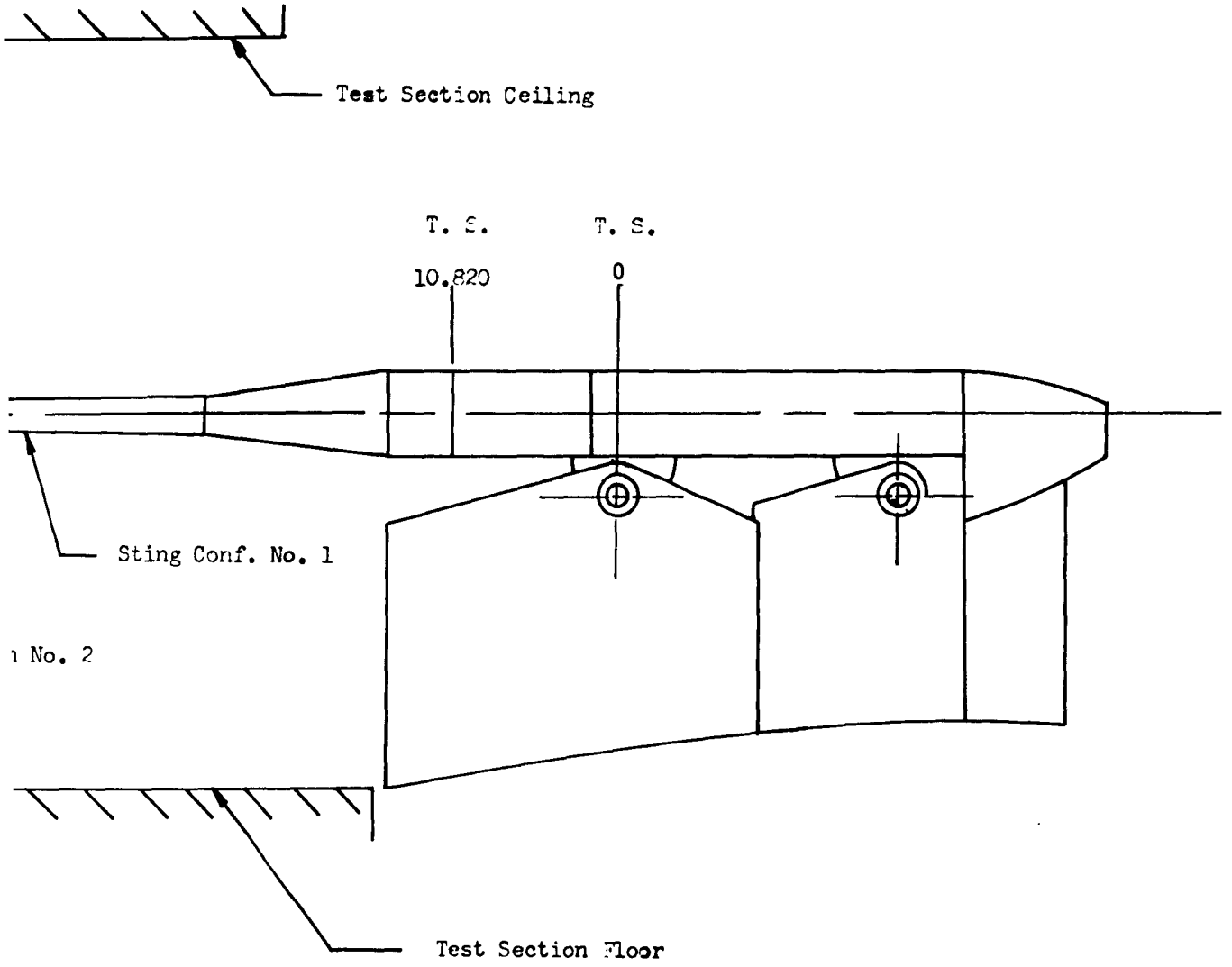


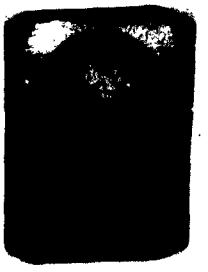
SLV-1B Installation Ske

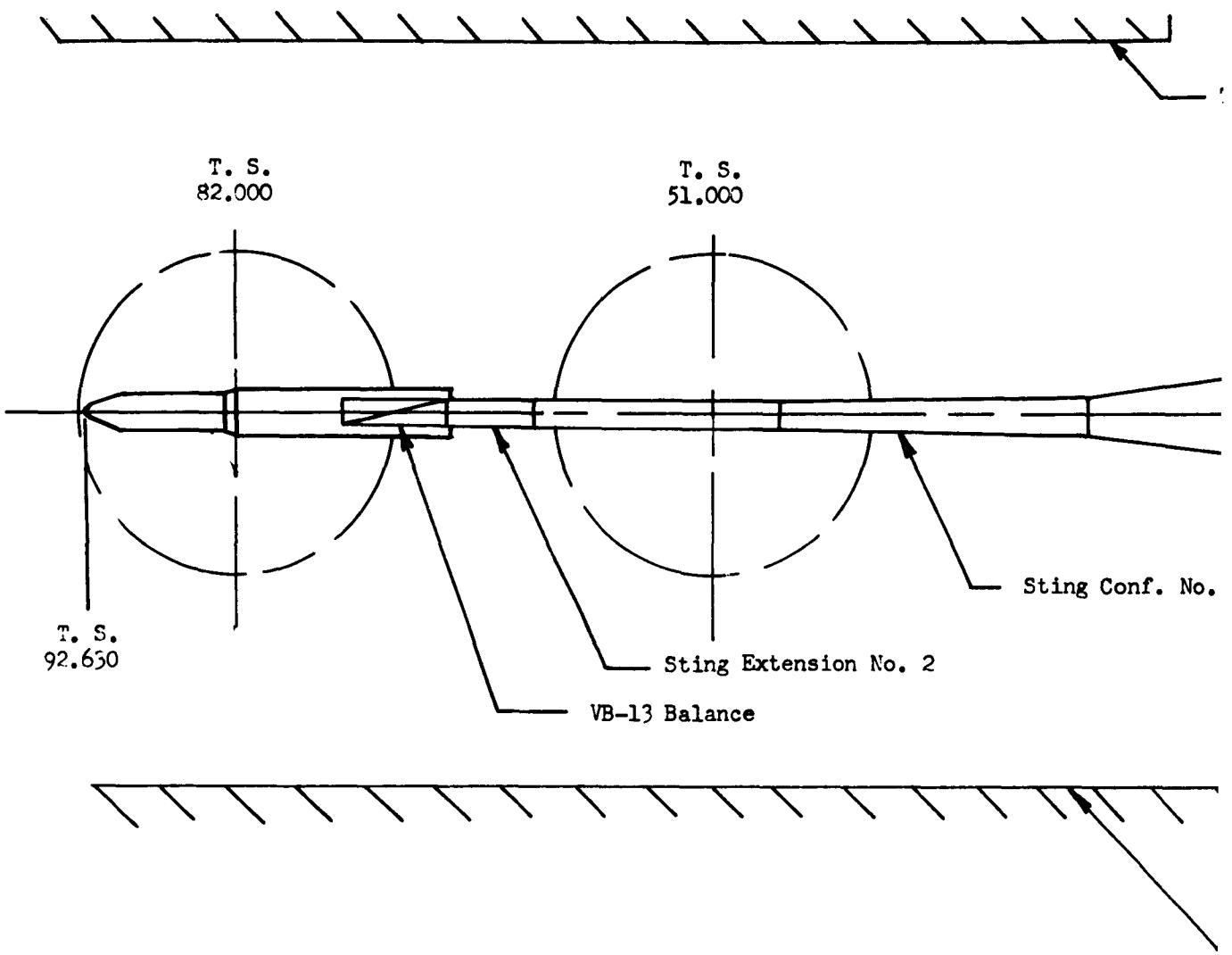
[redacted]

Figure 5. SLV-1B Installation sketch.



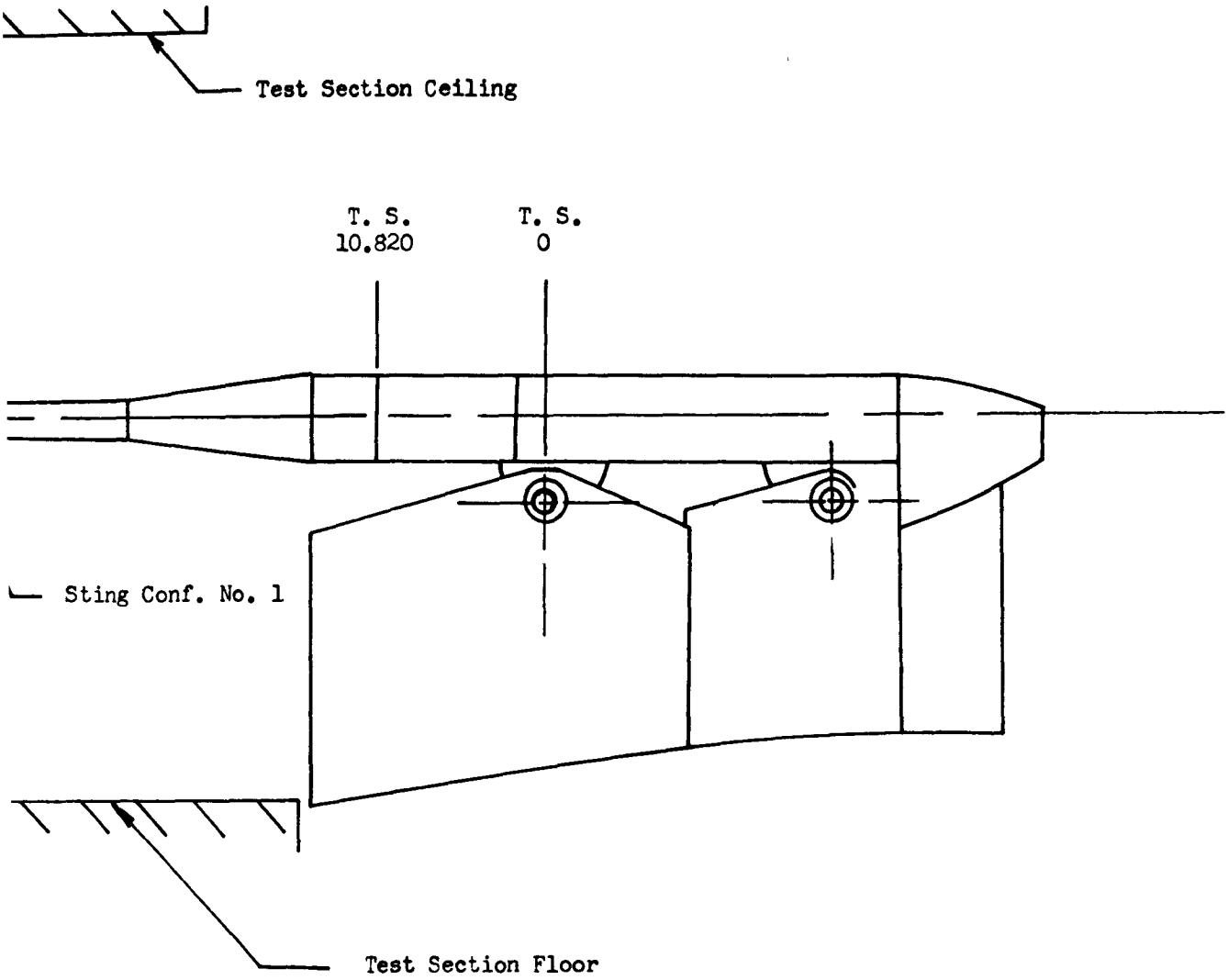
LV-1B Installation Sketch





SLV-1B Second Stage Install

Figure 6. SLV-1B Second stage installation sketch.



econd Stage Installation Sketch

also calibrated for load deflections. Following installation of the model in the tunnel, additional load checks were made to ensure that the balance and data systems were functioning properly.

For test runs the tunnel was started with the model at zero angle of attack. When the flow was established the model was pitched to the maximum negative angle of attack, then back through zero to the maximum positive angle of attack, and returned to zero before the termination of the run. The angle of attack range through which the model was pitched was from a negative 10 degrees to a positive 10 degrees.

The test was conducted in the Mach number range of 0.6 to 5.0 and a dynamic pressure range of 900 to 2,500 psf.

Data cards were sampled before and after each run to obtain "wind on" and "wind off" data. Tare cards were also sampled before each run to permit a correction for model weight tare effects.

Data were sampled at the rate of 10 times per second for the body-alone and second-stage configurations, and 5 times per second when the fins were on the body. The data were digitized and recorded on magnetic tape. At the conclusion of each run, data cards were punched from the tape. The data cards were checked after each run to ensure satisfactory results. After the cards were accepted, the model and/or Mach number was changed. On-the-line data plotting was done by analog computer data reduction to parallel and check digitized data.

7. DATA REDUCTION.

Static force data were reduced by digital computer to obtain nondimensional force and moment coefficients about the body axes. A complete description of the data reduction procedure is presented in reference 3.

All coefficients were corrected for model weight tares, and angle of attack was corrected for sting and balance deflection. Axial force data are presented in three coefficient forms: axial force corrected for base pressure (C_A), axial force uncorrected for base pressure (C_{AU}), and axial force due to base pressure (C_{AB}).

Pitching moment was referenced to station 25.5 for the B_3 configurations and to station 14.1 for the B_4 configuration.

To present some means of determining data accuracies, static accuracies of the VB-13 balance are presented. The tabulated accuracies were obtained by computing a "root mean square" deviation between the applied and calculated loads over the maximum load range.

Results are as follows:

Component	Load	Coefficient
Normal force	0.74 lb.	0.0163
Side force	0.44 lb.	0.0097
Axial force	0.35 lb.	0.0077
Rolling moment	0.59 in-lb.	0.0043
Pitching moment	0.74 in-lb.	0.0054
Yawing moment	0.44 in-lb.	0.0032

8. DATA ANALYSIS.

The experimental data show that the vehicle's first-stage static margin is approximately 15 inches less than originally estimated at Mach 3.8, which, for the nominal 76° trajectory, is the critical point. It appears that this is due to the fin effectiveness which is considerably lower than estimated. The vehicle's drag is higher transonically and lower supersonically than the original estimates. Fin rolling moment characteristics are generally as estimated except for lowered transonic effectiveness. At first-stage separation of the flight article, the nose cone and heat shield are jettisoned, exposing the payload. A model of this second stage was not available for these wind tunnel tests. The second stage as referred to in these tests consists of the vehicle forebody forward of body station 238.5 and is not representative of the actual vehicle second stage. This configuration was tested in an attempt to further define the body-alone center of pressure location and load distribution. The vehicle's second-stage static margin is more negative than estimated while the drag is less than estimated.

a. Wind tunnel tests.

The model tested was a 0.098 scale version of the SLV-1B. Transonic and supersonic tests were made on the first-stage configuration (with and without fins) and supersonic tests were made on the second-stage configuration to confirm the vehicle's estimated aerodynamic characteristics. The test runs on the first stage with and without fins were made to determine the fin effectiveness.

A standard six-component force balance was used to obtain normal force, pitching moment, axial force and rolling moment (yaw and yawing moments were negligible). The axial force (zero lift drag) data have been corrected to zero base drag.

The center of pressure locations are determined using the pitching moment and normal force derivatives; therefore, c.p. is directly effected by errors in both of these derivatives. The normal force and pitching moment errors are a function of several things; one of these being whether or not the normal force vector acts between the balance strain gages. For total vehicle tests, where the c.p. is well aft of the nose and between the balance strain gages, the c.p. location can be determined with ±4 to 6 inches for the full-scale vehicle. However, for body-alone tests, where the c.p. is close to the nose of the vehicle and well outside of the balance strain gages this error can be increased by as much as a factor of 6. For these reasons, the center of pressure data for the body alone (and consequently the fin alone) from these tests should be used with caution. The values of normal force are much less sensitive to this effect than the computed values of center of pressure.

The test data for total vehicle $C_{N_\alpha} S$ are below predicted values at Mach numbers below Mach 4.0. The maximum variation is 18% at Mach 0.6. At Mach numbers from 3 to 5 the disagreement between predicted and measured is within the usual accuracy of prediction methods.

The experimental body-alone data are greater than estimated supersonically and less than estimated transonically. Part of the disagreement between experiment and prediction for the full first-stage configuration is due to this fact.

The $C_{N_\alpha}S$ of the fin plus carryover was determined by subtraction of body-alone $C_{N_\alpha}S$ from total-vehicle $C_{N_\alpha}S$. Test data were consistently below the predicted values by 6% to 27% with the greatest disagreement occurring between Mach 2.0 to 3.0.

Test points produced a smooth curve with no unexpected variations in the pitching moment derivative.

The test data have been corrected by using a calculated friction drag and adding to that the pressure drag obtained from the wind tunnel and the calculated drag for six explosive bolt fairings.

Corrected wind tunnel data for the total vehicle are higher subsonically and transonically but lower supersonically than the estimates. The maximum variations were a 20% increase over the estimated data at Mach 1.0 and a 14% decrease below the estimated data at Mach 5.0.

Body-alone test data agree very well with the estimated data.

Zero lift fin drag, $(C_{D_o}S)_{fin}$, was obtained by subtracting the $C_{D_o}S$ of the body alone from the $C_{D_o}S$ of the total vehicle. The fin drag was underestimated subsonically and transonically and overestimated supersonically.

The c.p. variation for the total vehicle and body alone were computed from experimentally determined C_{m_α} and C_{N_α} values.

The test data (essentially rigid body) values of center of pressure for the total vehicle have the same trend as the predictions but indicate that the vehicle is less stable supersonically than estimated. The maximum decrease in static margin is about 15 inches or 0.484 body diameter. The maximum decrease in rigid body static margin occurred at Mach 3.8 and dropped from 35 inches of static margin to 20 inches.

In view of the problems of measuring the body-alone center of pressure no firm comments may be made concerning the disagreement between the experimental and predicted values. Since the body alone data are also used in determining the fin center of pressure the same caution must be taken when evaluating or using the fin center of pressure data.

Wind tunnel data and estimates for rolling moment coefficient are in generally good agreement. Test data did not show the predicted sharp peak transonically and are about 17% below the estimate in this region; for speeds in excess of Mach 2.0, test data are slightly higher. Supersonically the maximum difference between test and predicted values occurs at Mach 5.0 and is about 9.5%.

b. Second stage.

Second-stage aerodynamic data parameters were determined experimentally from Mach 2.0 to 5.0. The experimental normal force data agree very well with the predicted value at Mach 2.0. However, as the velocity increases, the test results show a gradual increase while the predicted value is constant for speeds in excess of Mach 3.0. The difference between the two values is a maximum of 25% at Mach 5.0.

A negative static margin of 75 inches was predicted at the Mach number for second-stage ignition; test data showed this negative static margin to be about 100 inches. In the range from Mach 3.0 to Mach 5.0, the maximum difference between test and prediction occurred at Mach 3.0 where the experimental static margin was 17% greater than predicted.

The experimental drag was lower than estimated over the entire test range. The maximum difference between predicted and measured drag occurred at Mach 4.0 where the test data were 14% below the predicted values.

9. CONCLUSIONS AND RECOMMENDATIONS.

The following conclusions may be derived from the wind tunnel tests on the SLV-1B model.

a. First stage.

The vehicle's normal force parameter is generally less than estimated with the largest differences occurring at transonic speeds. This difference arises partly from the body-alone characteristics and partly from the fin characteristics.

The rigid body center of pressure is forward of the estimates, thus resulting in a less stable rigid vehicle than estimated. This difference amounts

to about 15 inches decrease in static margin at a Mach number of 3.8. It appears that the primary reason for this effect lies in a lower fin effectiveness than estimated.

The test data show that the vehicle's zero lift drag parameter is less supersonically and greater transonically than the estimated values. Differences between fin-measured and estimated drags essentially account for these differences.

Estimated center of pressure variations due to the flexibility for the nominal 76° trajectory, when added to test data, show the vehicle to be unstable above Mach 3.0.

b. Second stage.

Normal force and zero lift drag force parameter estimates differed from test data by a maximum of 25 and 14% respectively between Mach 3.0 and 5.0. The parameters were under- and over-estimated respectively and the differences increased with Mach number.

Test data gave values for center of pressure 25 inches forward of the predicted location for an increase in the negative static margin of 33% at Mach 3.0. The difference decreases as Mach number increases resulting in a 15-inch difference at Mach 4.0.

APPENDIX I

HIGH-SPEED WIND TUNNEL RUN LOG

HIGH SPEED WIND TUNNEL RUN LOG

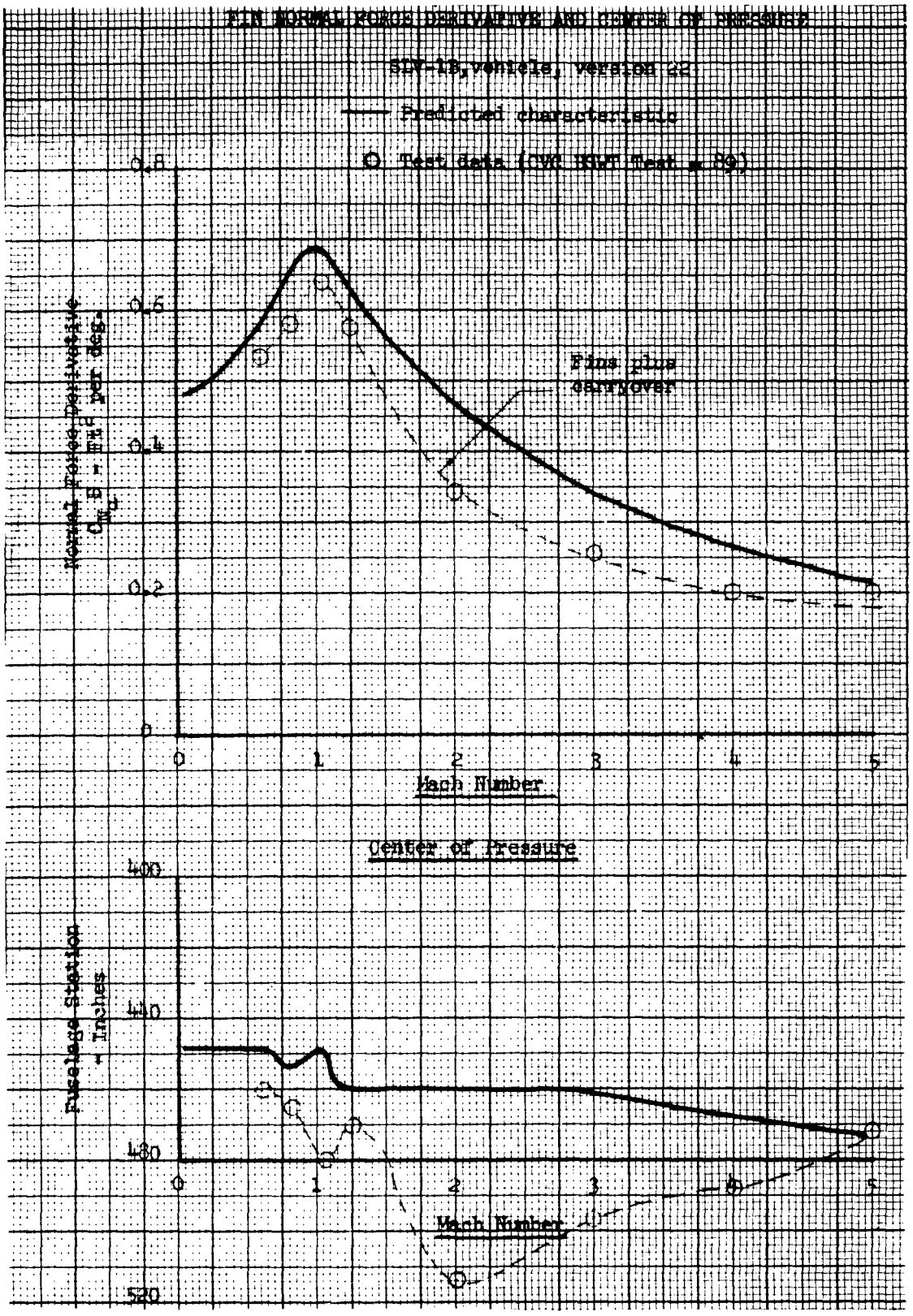
RUN No.	CONFIGURATION	MACH NO.	Q PSFA	α RANGE DEGREES	ϕ	△F	COMMENTS
1	B_3	1.2	1440	+10 to -10	0	-	
2	B_3F_2	"	"	"	"	0	
3	"	"	"	"	"	3	
4	"	1.0	"	"	"	"	
5	"	.8	1300	"	"	"	
6	"	.6	900	"	"	"	
7	"	"	"	"	"	0	
8	"	.8	1300	"	"	"	
9	"	1.0	1440	"	"	"	
10	B_3	"	"	"	"	-	
11	"	.8	1300	"	"	-	
12	"	.6	900	"	"	-	
13	"	2.0	1440	"	"	-	
14	B_3F_2	"	"	"	"	0	
15	"	"	"	"	"	3	
16	"	3.0	"	"	"	"	
17	"	"	"	"	"	0	
18	B_3	"	"	"	"	-	
19	"	4.0	"	"	"	-	
20	B_3F_2	"	"	"	"	0	
21	"	"	"	"	"	3	
22	"	5.0	"	"	"	"	
23	"	"	"	"	"	0	

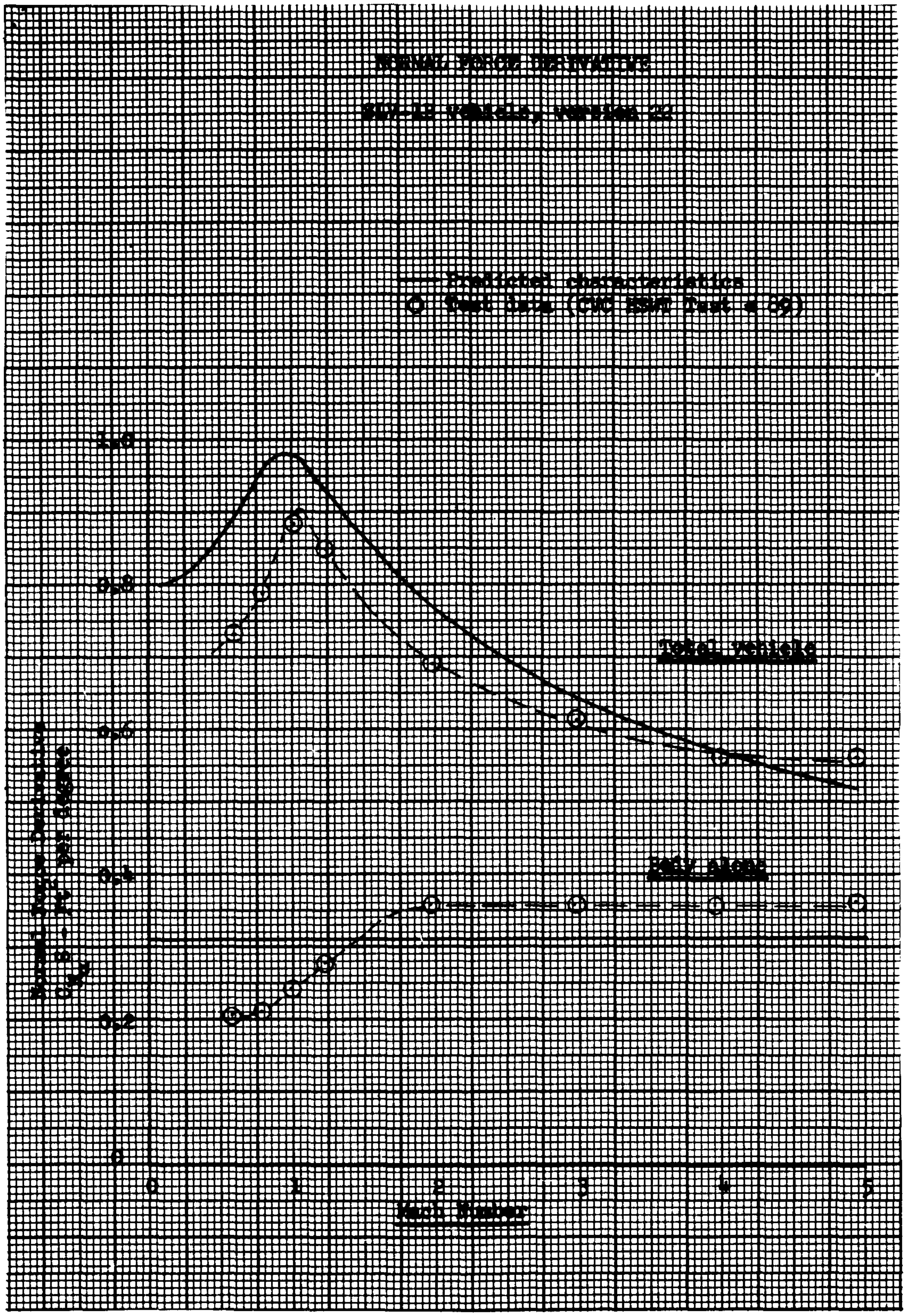
HIGH SPEED WIND TUNNEL RUN LOG (cont'd)

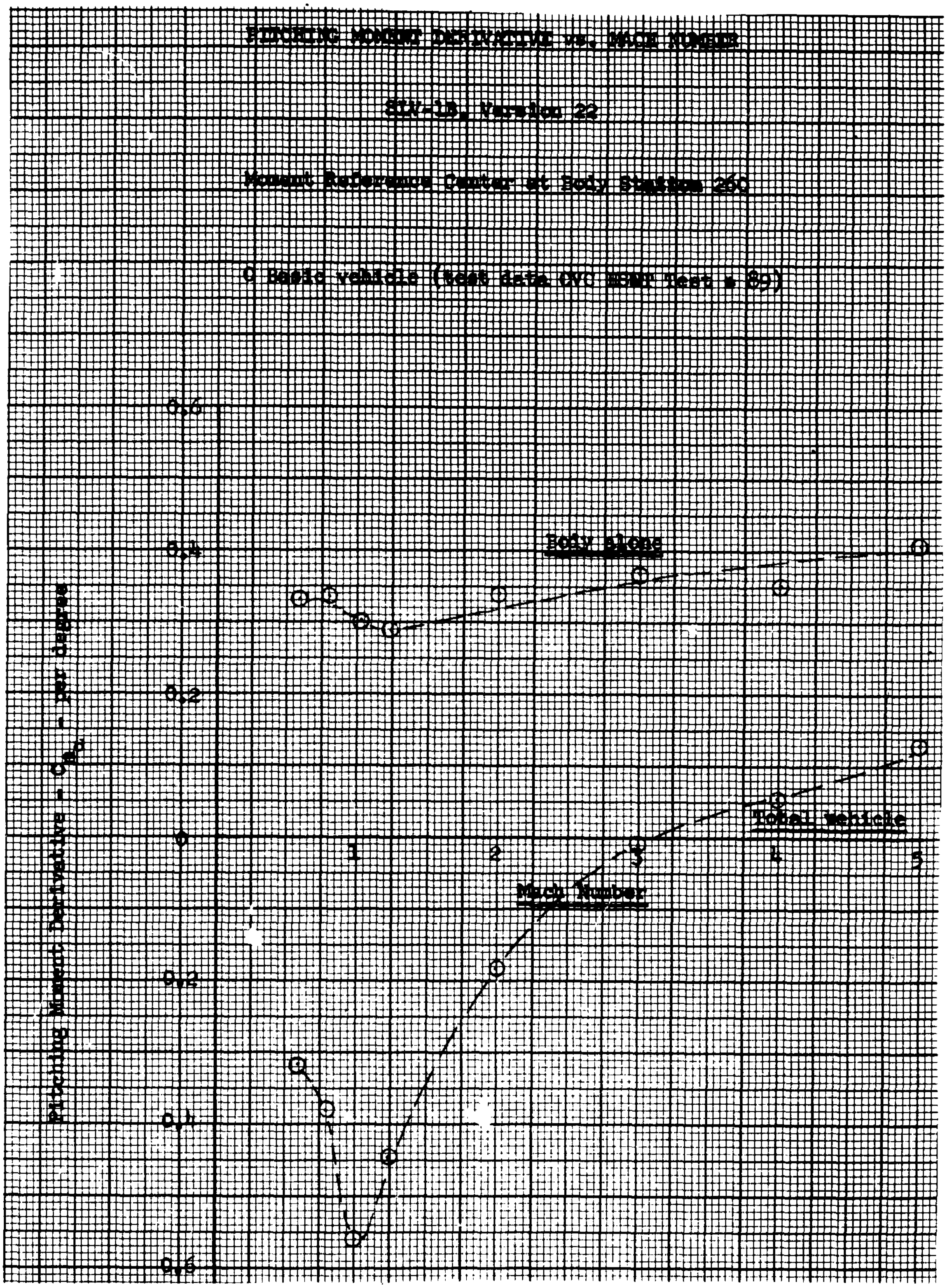
RUN NO.	CONFIGURATION	MACH NO.	Q PSFA	α RANGE DEGREES	ø	Δ_F	COMMENTS
24	B_3	5.0	1440	+10 to -10	0	-	
25	B_4	"	"	"	"	-	
26	"	4.0	2500	"	"	-	
27	"	3.0	"	"	"	-	
28	"	2.0	"	"	"	-	
29	B_3F_2	.6	900	"	"	0	Rerun of 7

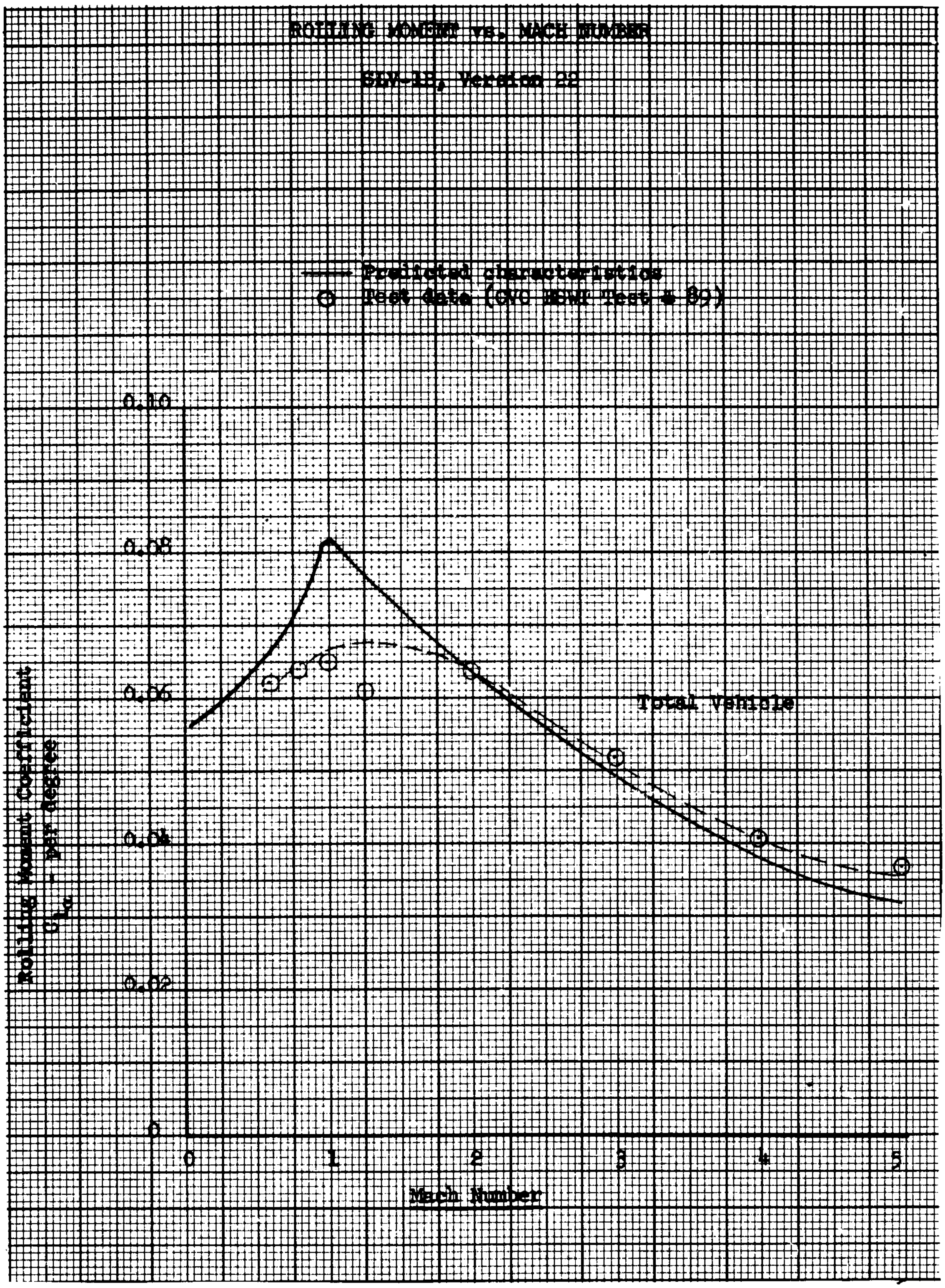
APPENDIX II

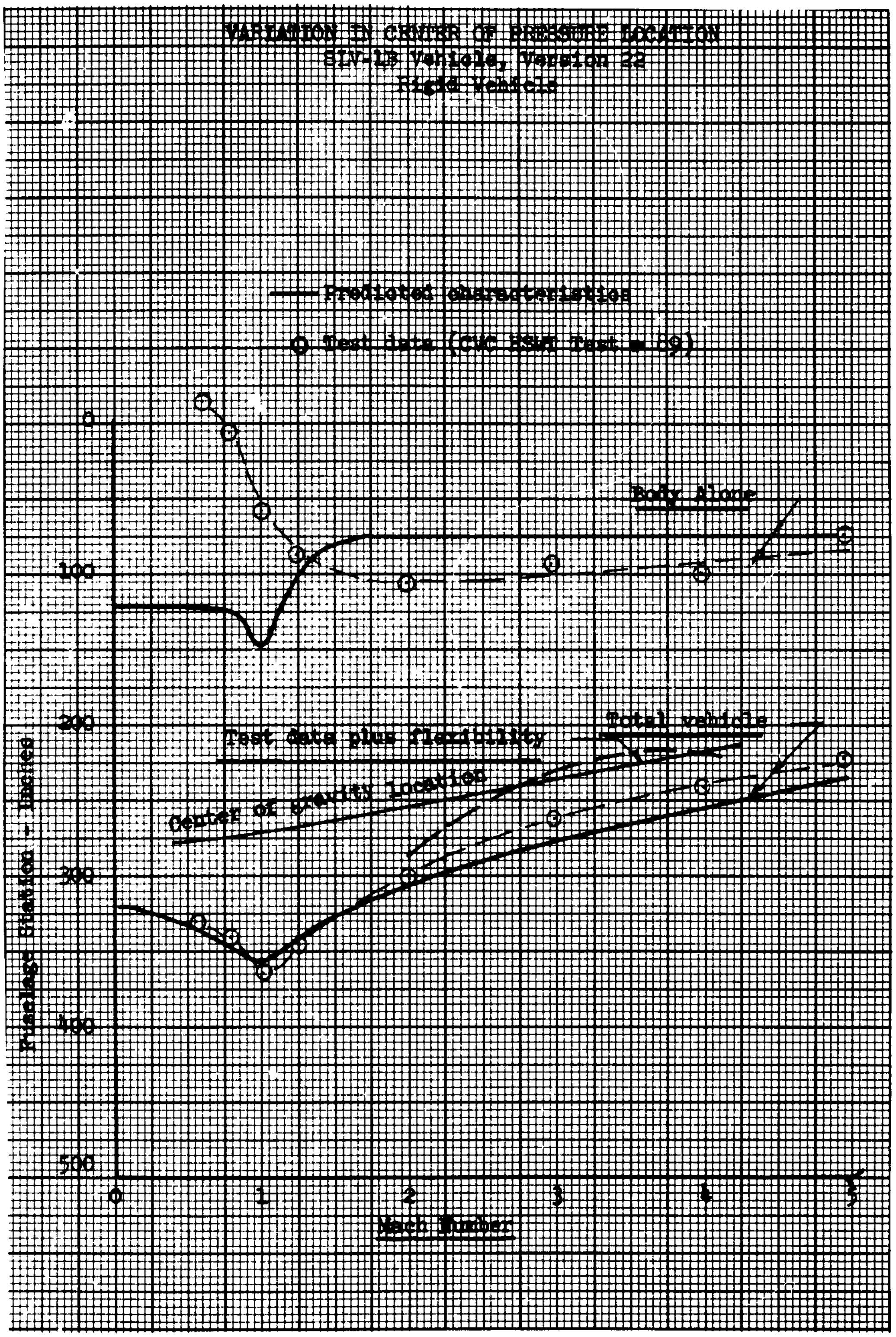
ANALYSIS PLOTTED DATA

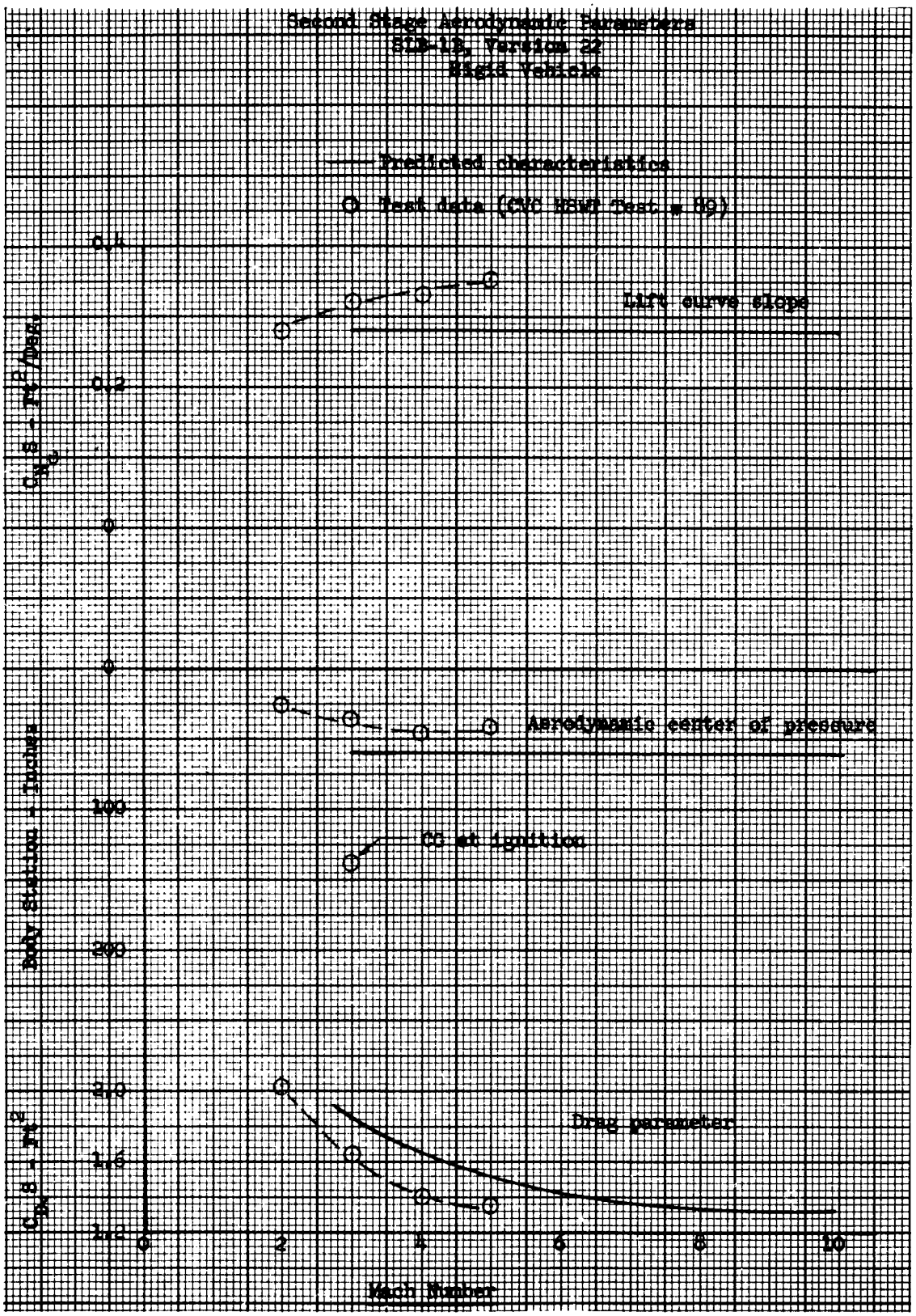

FIN NORMAL FORCE DERIVATIVE AND CENTER OF PRESSURE
SLV-1B, vehicle, version 22
Predicted characteristic
Test data (CVX BKW Test # 89)
Normal Force Derivative C_{N_α} - Per deg.
0.8
0.6
0.4
0.2
0
Fins plus carryover
0
1
2
3
4
5
Mach Number
Center of Pressure
Fuselage Station - Inches
400
440
480
520
0
1
2
3
5
Mach Number

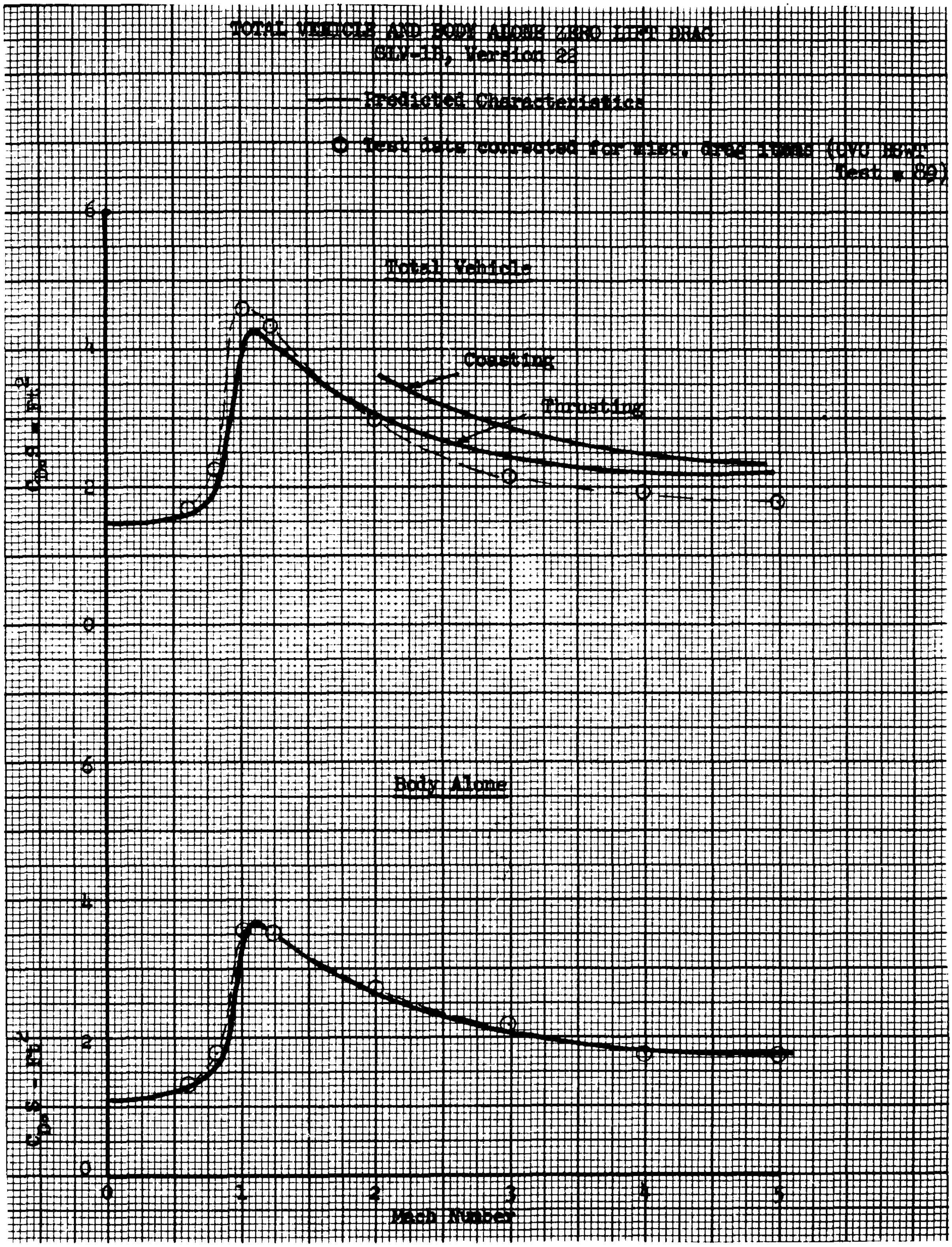

NORMAL FORCE DERIVATIVE
Predicted characteristics
1.0
0.8
0.6
0.4
0.2
0
Total vehicle
Body alone
0
1
2
3
4
5
Mach Number

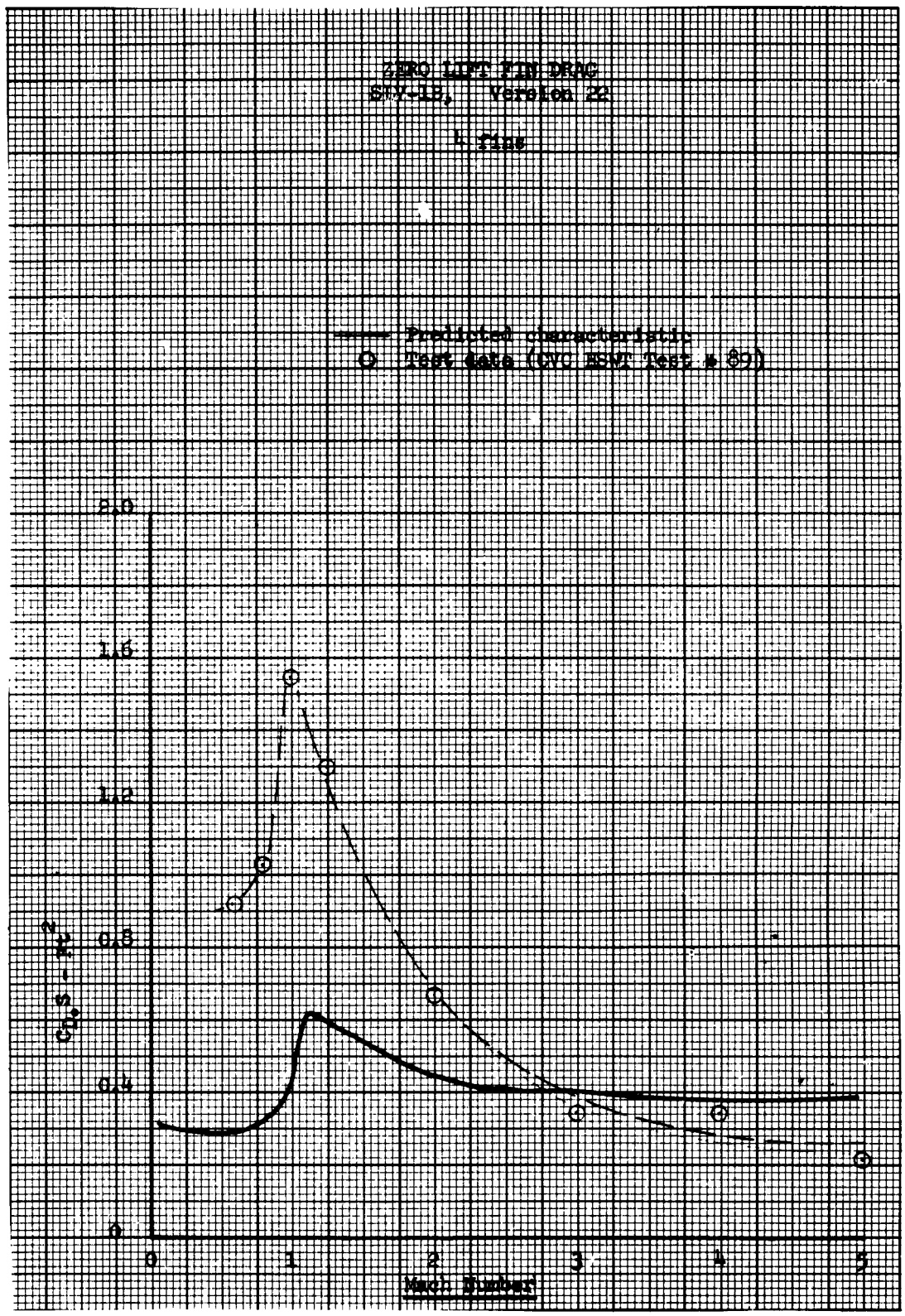

PITCHING MOMENT DERIVATIVE vs. MACH NUMBER
SIV-IB, Version 22
Moment Reference Center at Body Station 260
Body alone
Total vehicle
Mach Number
Pitching Moment Derivative - C_{m_α} - per degree
0.6
0.4
0.2
0
0.2
0.4
0.6
1
2
3
4
5


ROLLING MOMENT vs. MACH NUMBER
Predicted characteristics
Test data
0.10
0.08
0.06
0.04
0.02
0
Total Vehicle
Rolling Moment Coefficient
0
1
2
3
4
5
Mach Number


VARIATION IN CENTER OF PRESSURE LOCATION
SIV-1B Vehicle, Version 22
Rigid Vehicle
Predicted characteristics
Test data (CVC HSWT Test # 89)
Body Alone
Test data plus flexibility
Total vehicle
Center of gravity location
Fuselage Station - Inches
0
100
200
300
400
500
0
1
2
3
4
5
Mach Number


Second Stage Aerodynamic Parameters
SLV-3B, Version 22
Block Vehicle
Predicted characteristics
Test data (CVC 8AW Test # 89)
Lift curve slope
Aerodynamic center of pressure
CG at ignition
Drag parameter
Mach Number
0.4
0.2
0
-0.2
100
200
2.0
1.6
1.2
0
2
4
6
8
10


TOTAL VEHICLE AND BODY ALONE ZERO LIFT DRAG
Version 22
Predicted Characteristics
Total Vehicle
Coasting
Thrusting
Body Alone
6
4
2
0
0
1
2
3
4
5
Mach Number

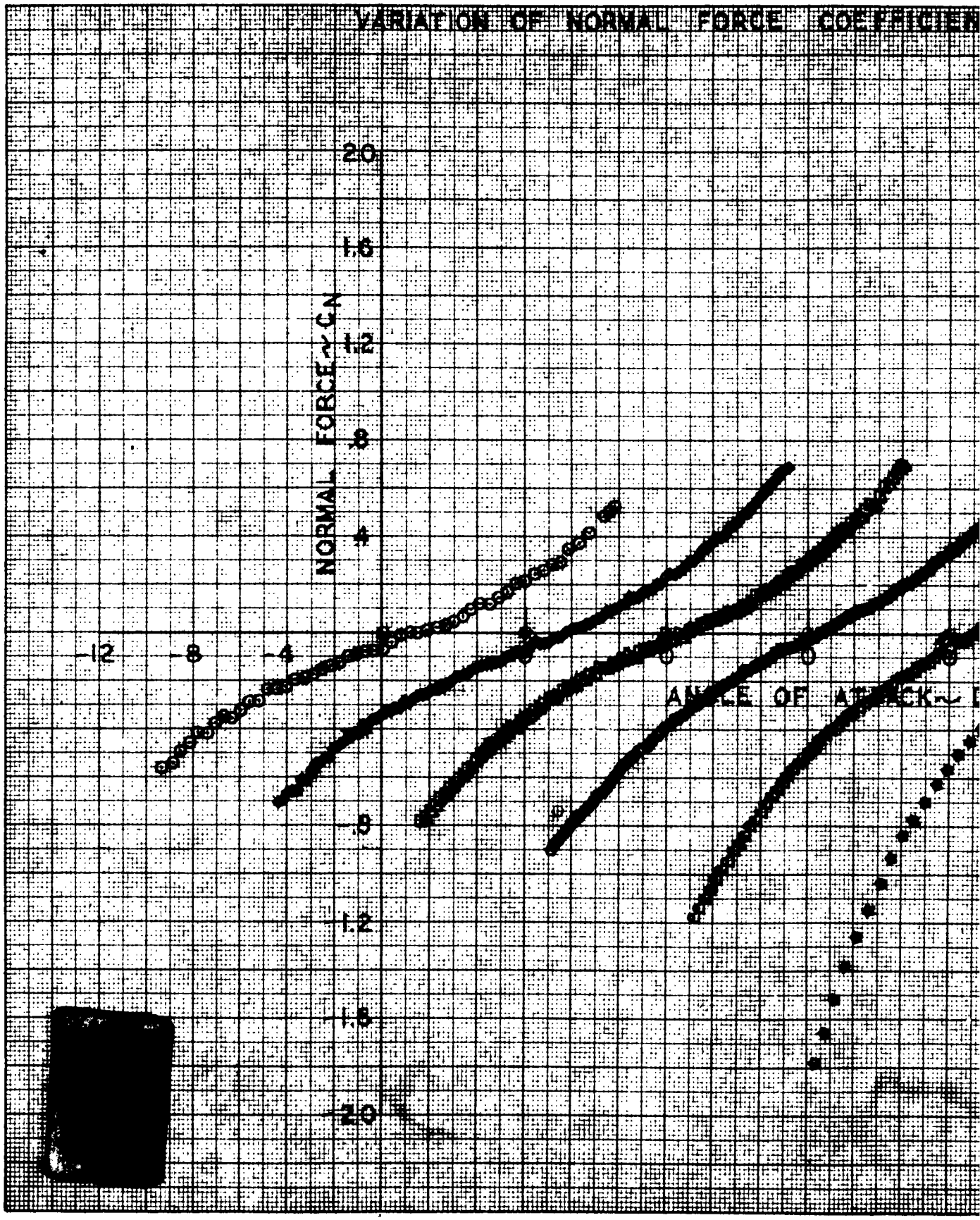

ZERO LIFT FIN DRAG
SV-1B, Version 22
4 Fins
Predicted characteristic
Test data (CVC ESWT Test # 89)
2.0
1.6
1.2
0.8
0.4
0
$C_{D_{fin}}$
0
1
2
3
4
5
Mach Number

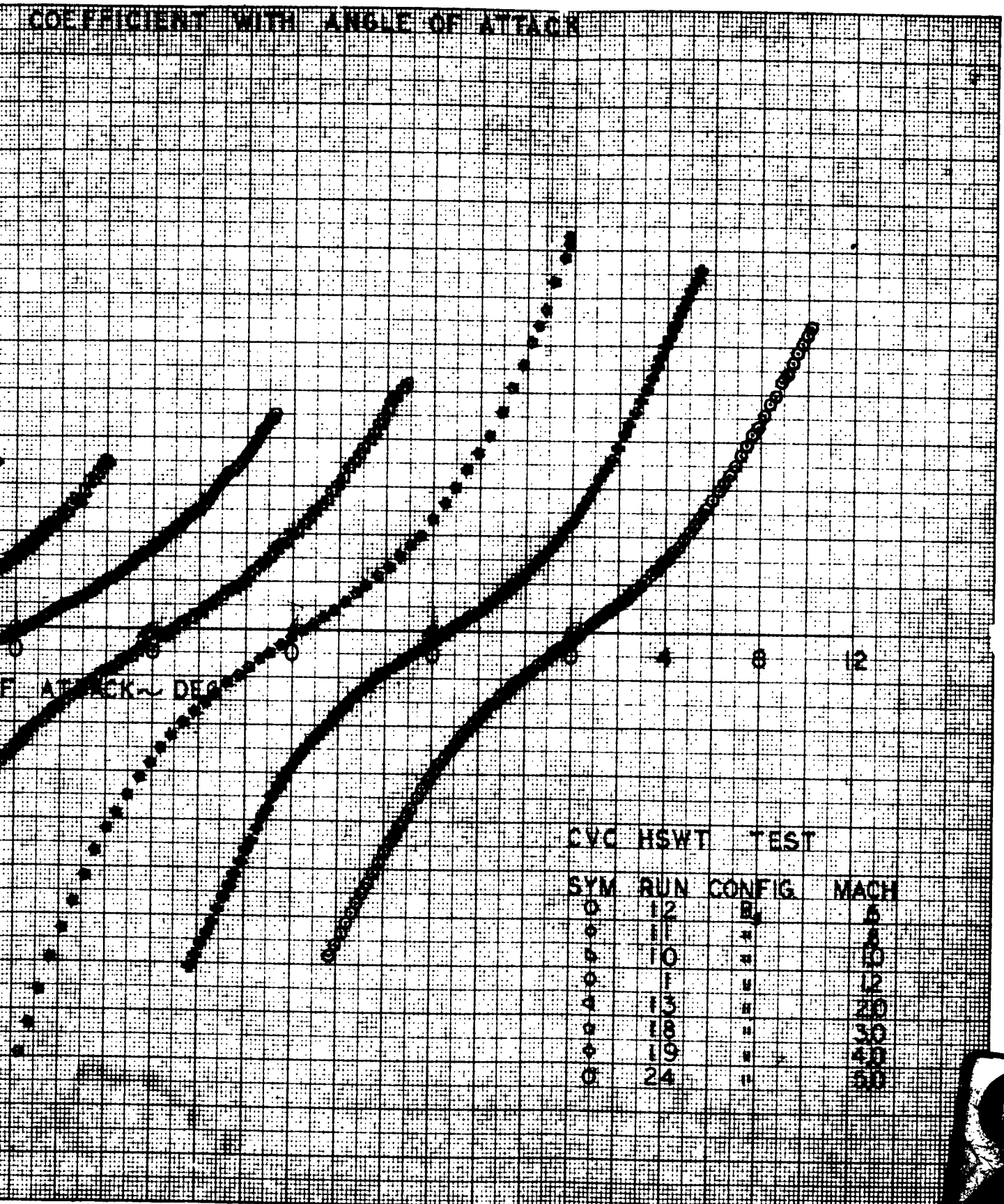
APPENDIX III

TEST RUNS - PLOTTED DATA

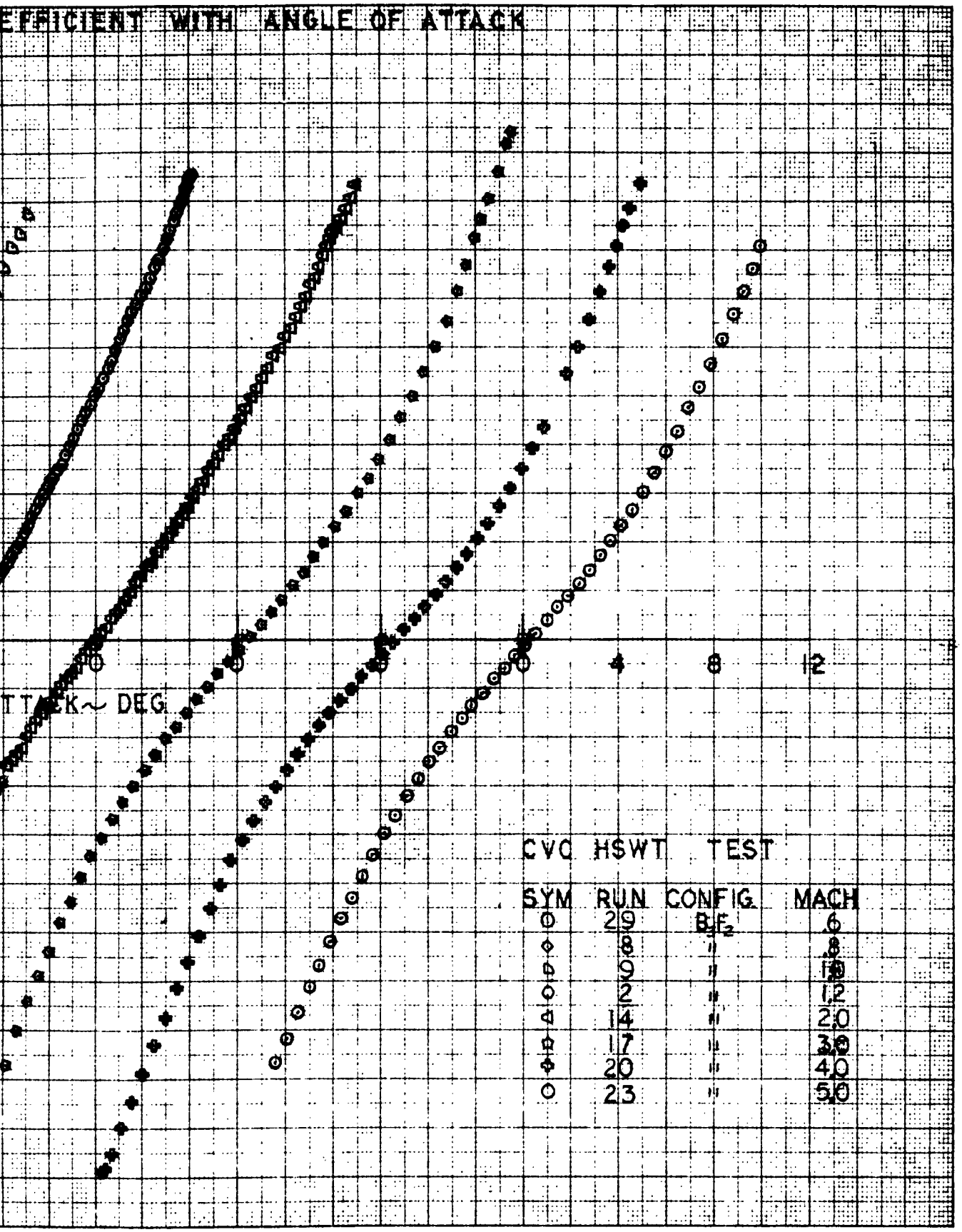
PLOTTED DATA INDEX

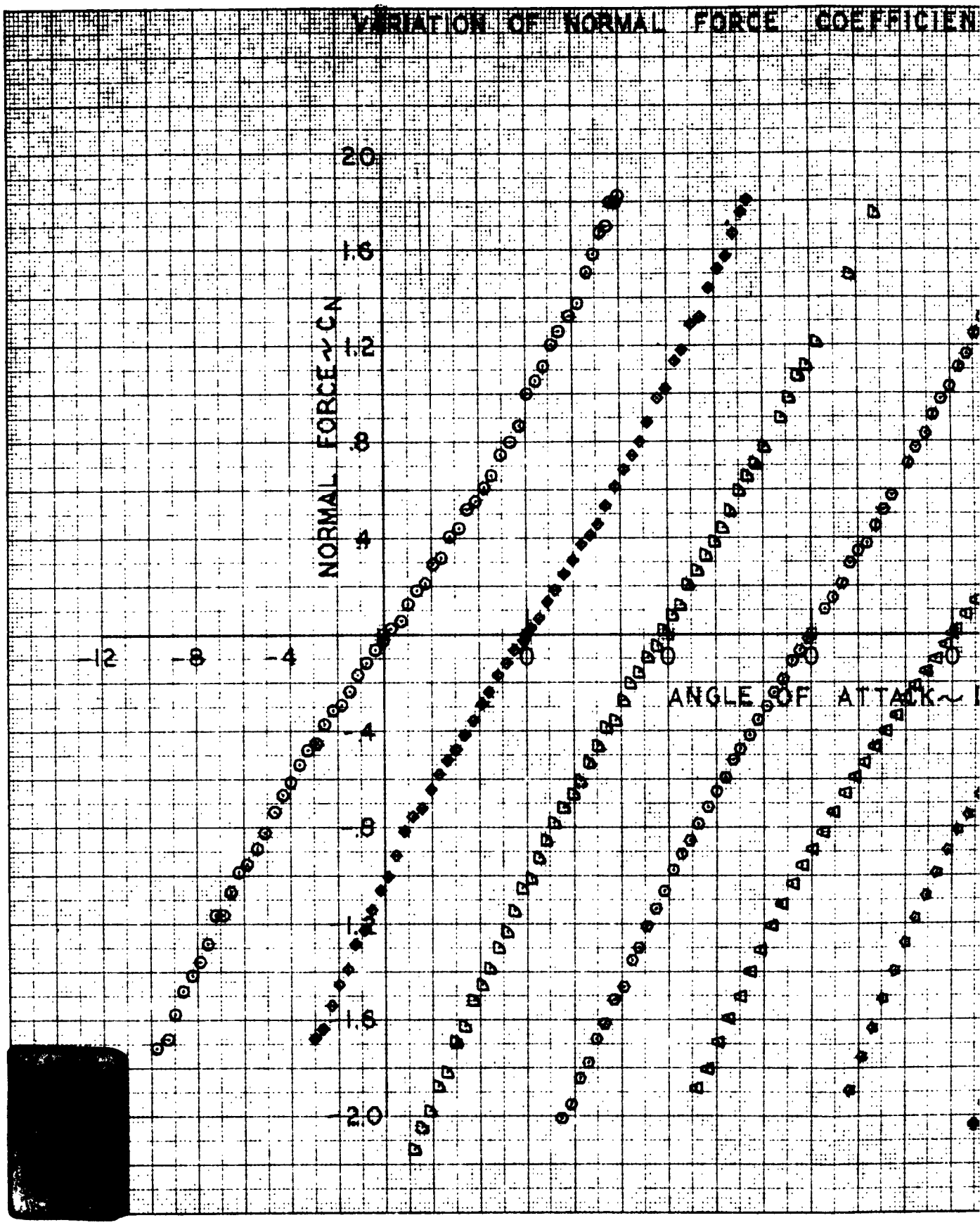
Run No.	Conf.	M	Δ_F	Page Number			
				C_N/α	C_m/α	C_l/α	C_A/α
12	B_3	0.6	-	35	39	43	47
11	"	0.8	-				
10	"	1.0	-				
1	"	1.2	-				
13	"	2.0	-				
18	"	3.0	-				
19	"	4.0	-				
24	"	5.0	-				
29	B_3F_2	0.6	0	36	40	44	48
8	"	0.8	"				
9	"	1.0	"				
2	"	1.2	"				
14	"	2.0	"				
17	"	3.0	"				
20	"	4.0	"				
23	"	5.0	"				
6	B_3F_2	0.6	3	37	41	45	49
5	"	0.8	"				
4	"	1.0	"				
3	"	1.2	"				
15	"	2.0	"				
16	"	3.0	"				
21	"	4.0	"				
22	"	5.0	"				
28	B_4	2.0	-	38	42	46	50
27	"	3.0	-				
26	"	4.0	-				
25	"	5.0	-				

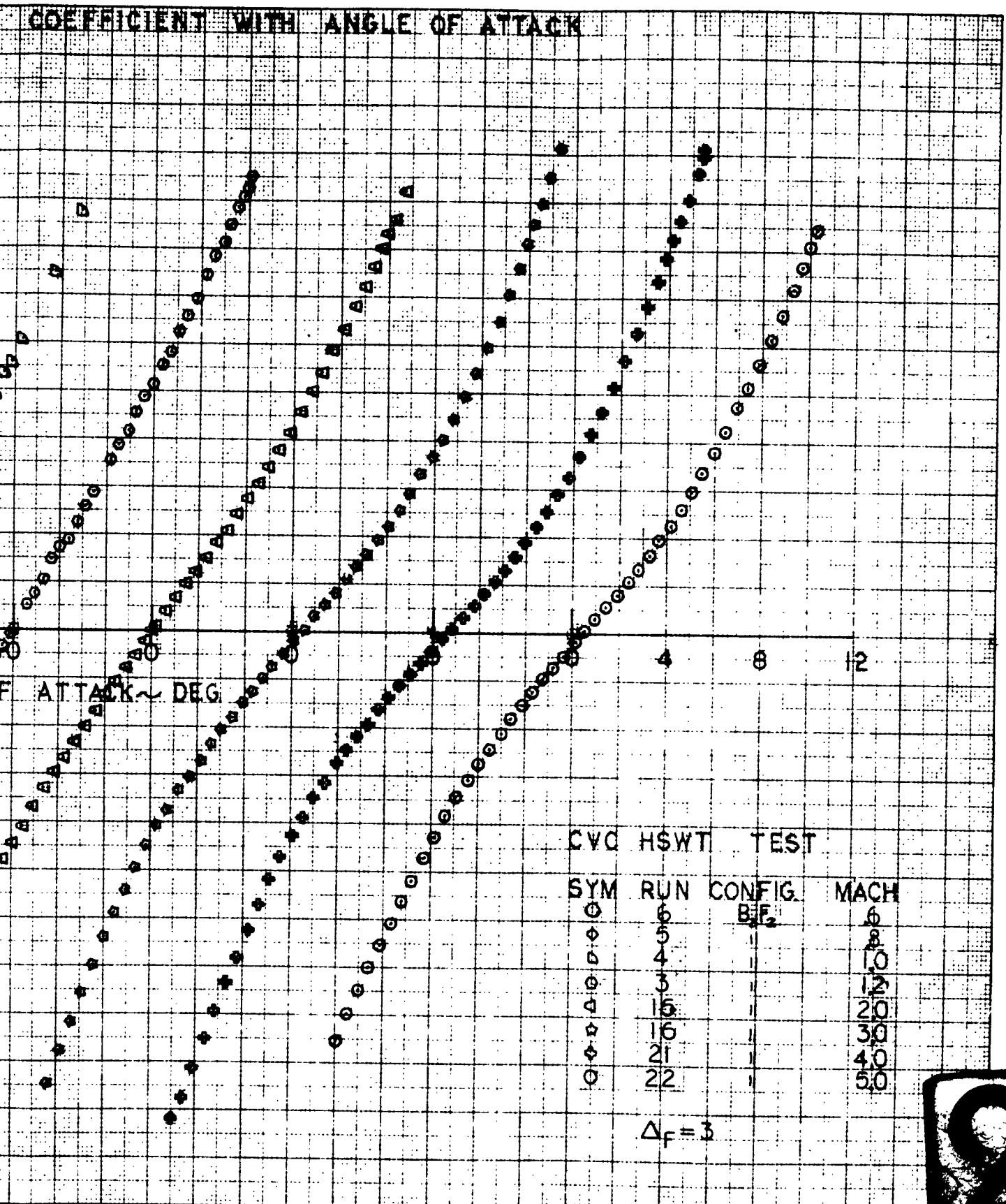

VARIATION OF NORMAL FORCE COEFFICIEN
NORMAL FORCE ~ C_N
2.0
1.6
1.2
.8
.4
-12
-8
-4
0
-.8
-1.2
-1.6
-2.0

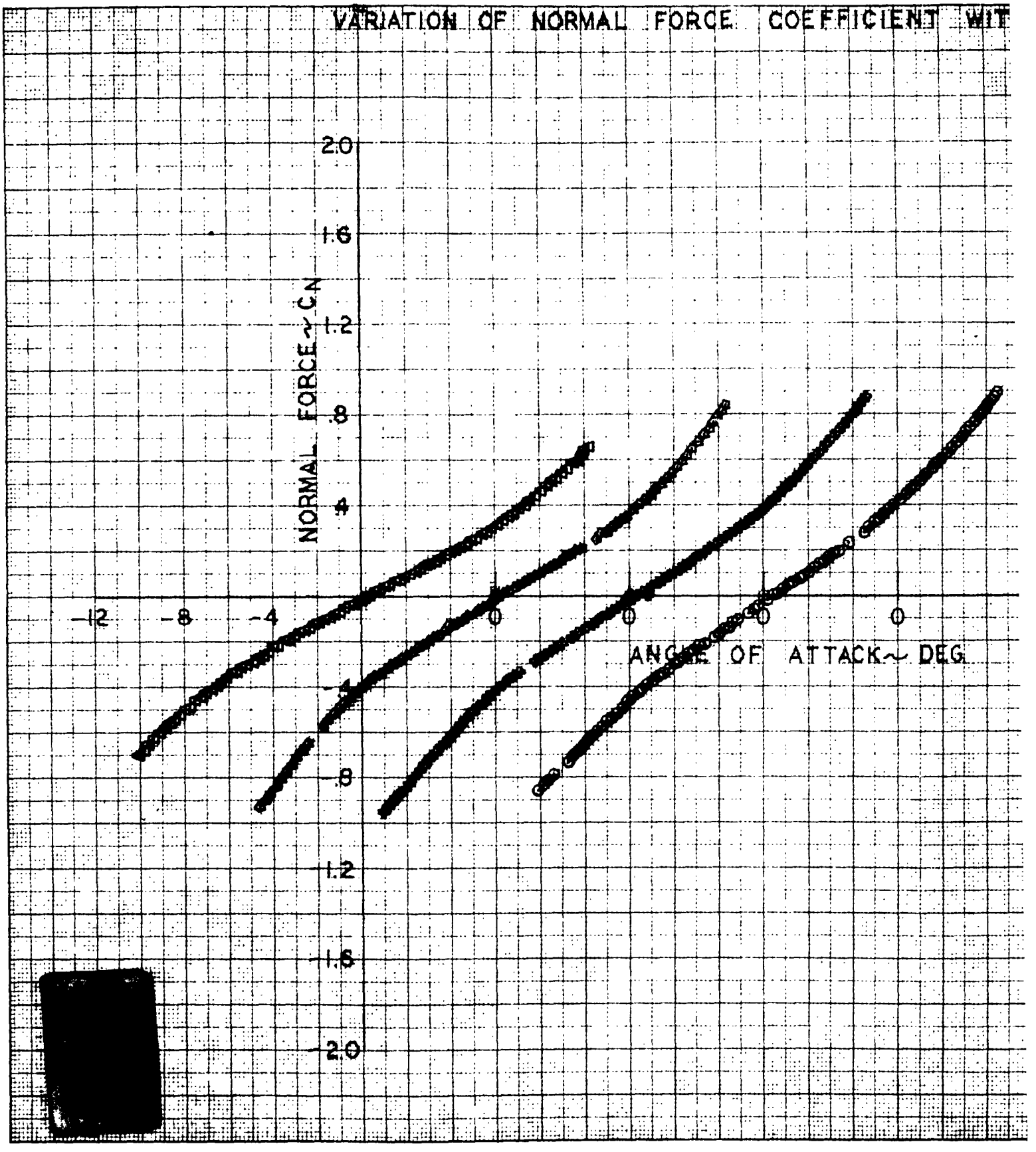

COEFFICIENT WITH ANGLE OF ATTACK
F ATTACK ~ DEG
8
12
CVC HSWT TEST
SYM RUN CONFIG MACH
12 B4 .60
11 " .70
10 " .80
9 " .90
8 " 1.20
3 " 1.30
1 " 1.40
24 " 1.50

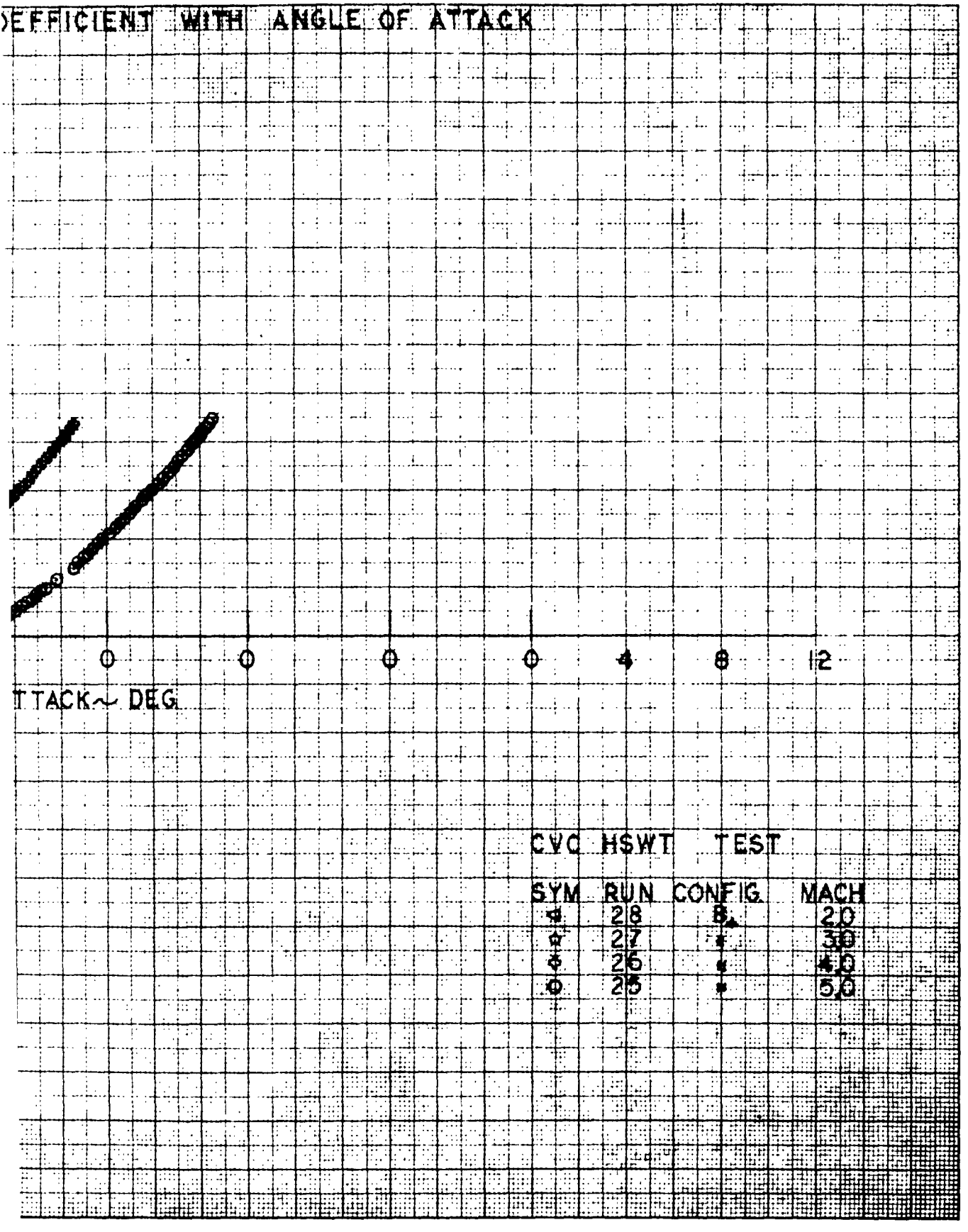
VARIATION OF NORMAL FORCE COEFFICIENT W
NORMAL FORCE~ C_N
2.0
1.6
1.2
.8
.4
-12
-8
-4
ANGLE OF ATTACK~ DEG.
-.4
-.8
-1.2
-1.6
-2.0

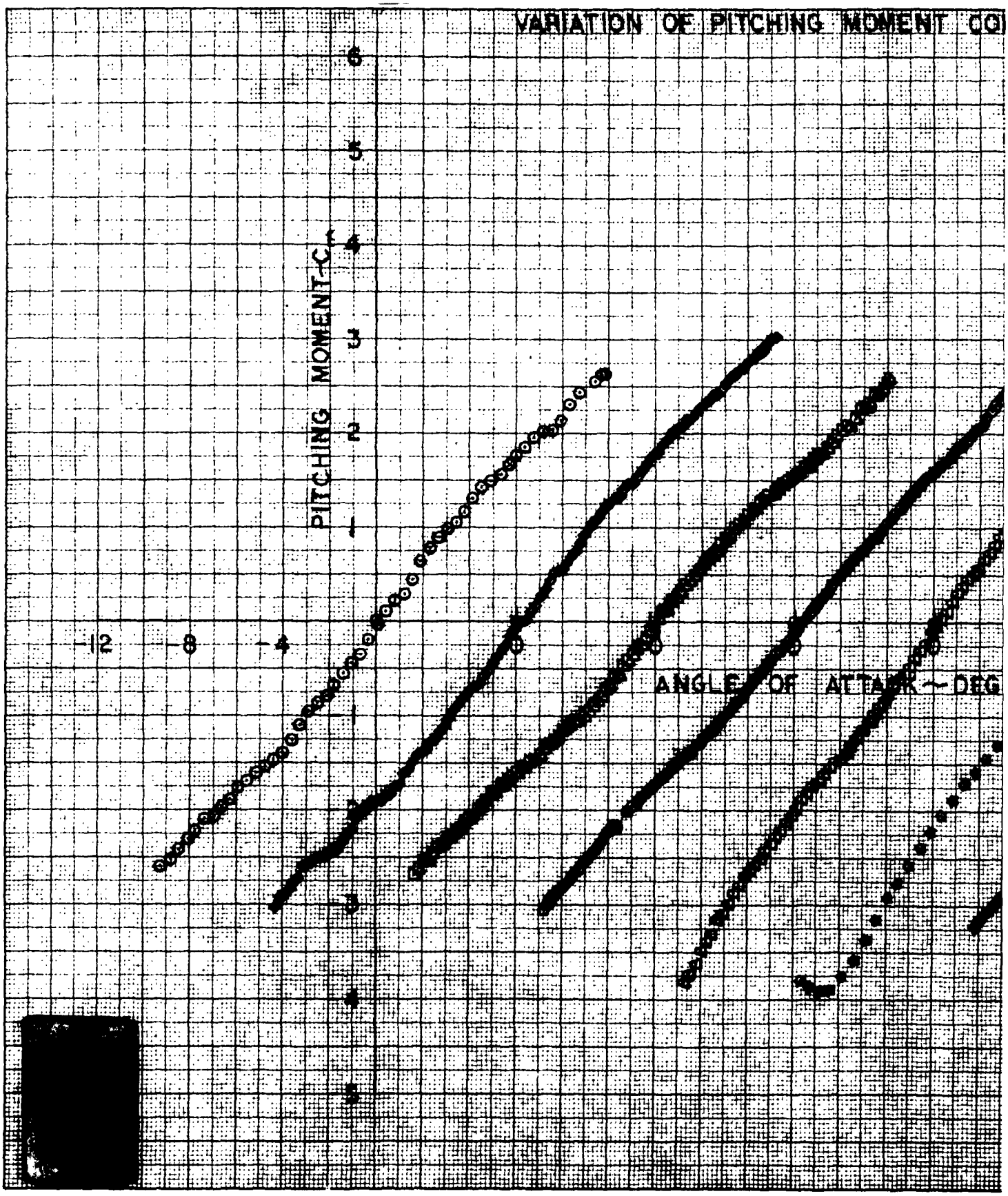

EFFICIENT WITH ANGLE OF ATTACK
TTACK~ DEG
CVC HSWT TEST
SYM RUN CONFIG MACH
29 BF2 .6
8 " .8
9 " 1.0
2 " 1.2
14 " 2.0
17 " 3.0
20 " 4.0
23 " 5.0

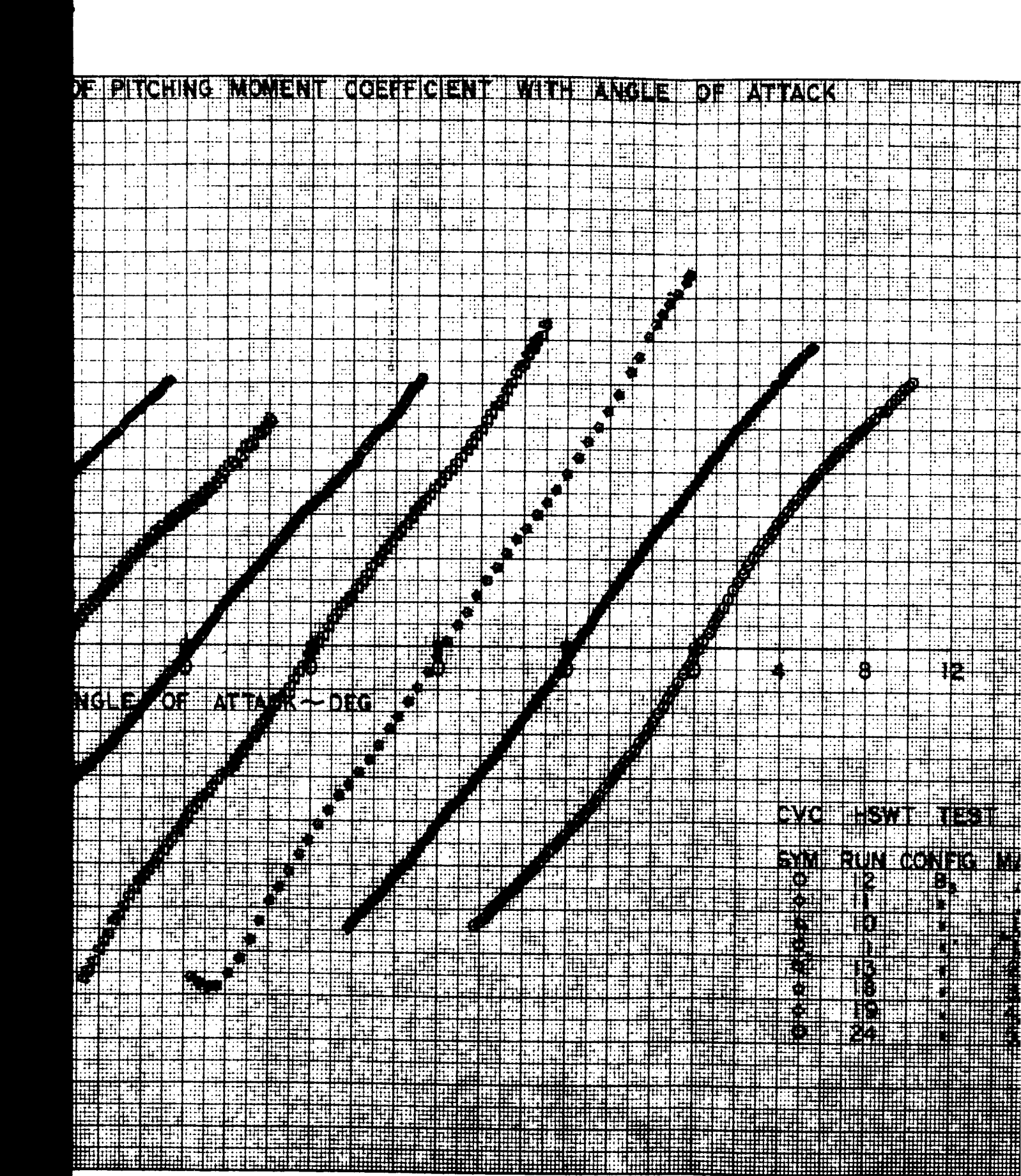

VARIATION OF NORMAL FORCE COEFFICIEN
NORMAL FORCE ~ CN
2.0
1.6
1.2
.8
.4
0
-.4
-.8
-1.2
-1.6
-2.0
-12
-8
-4
ANGLE OF ATTACK ~


COEFFICIENT WITH ANGLE OF ATTACK
4
8
12
F ATTACK~ DEG
CVC HSWT TEST
SYM RUN CONFIG. MACH
6 B,F2 .6
5 .8
4 1.0
3 1.2
15 2.0
16 3.0
21 4.0
22 5.0
$\Delta_F = 3$

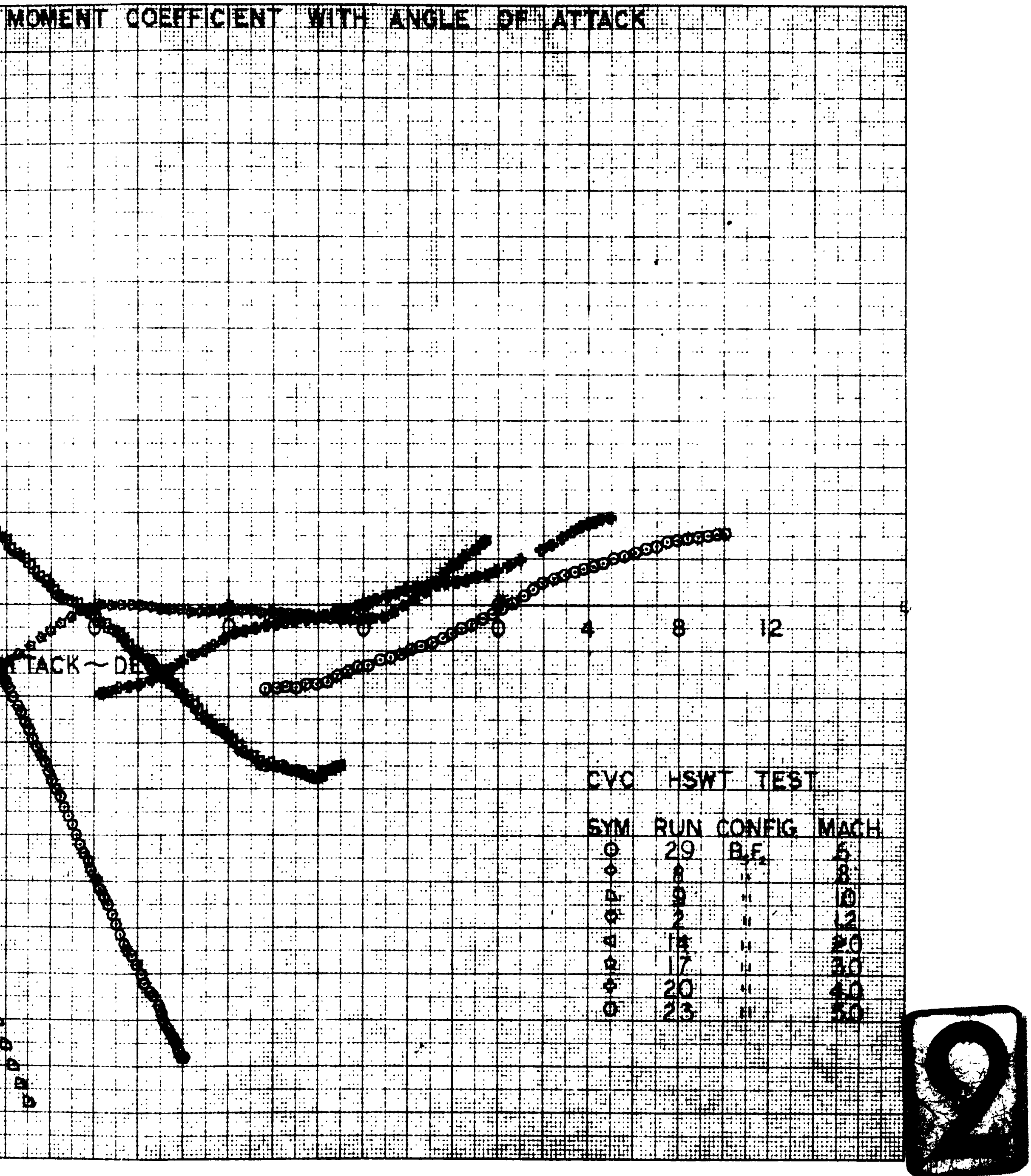

VARIATION OF NORMAL FORCE COEFFICIENT WIT
NORMAL FORCE~ C_N
2.0
1.6
1.2
.8
.4
-12
-8
-4
0
0
0
0
ANGLE OF ATTACK~ DEG
-.8
-1.2
-1.6
-2.0

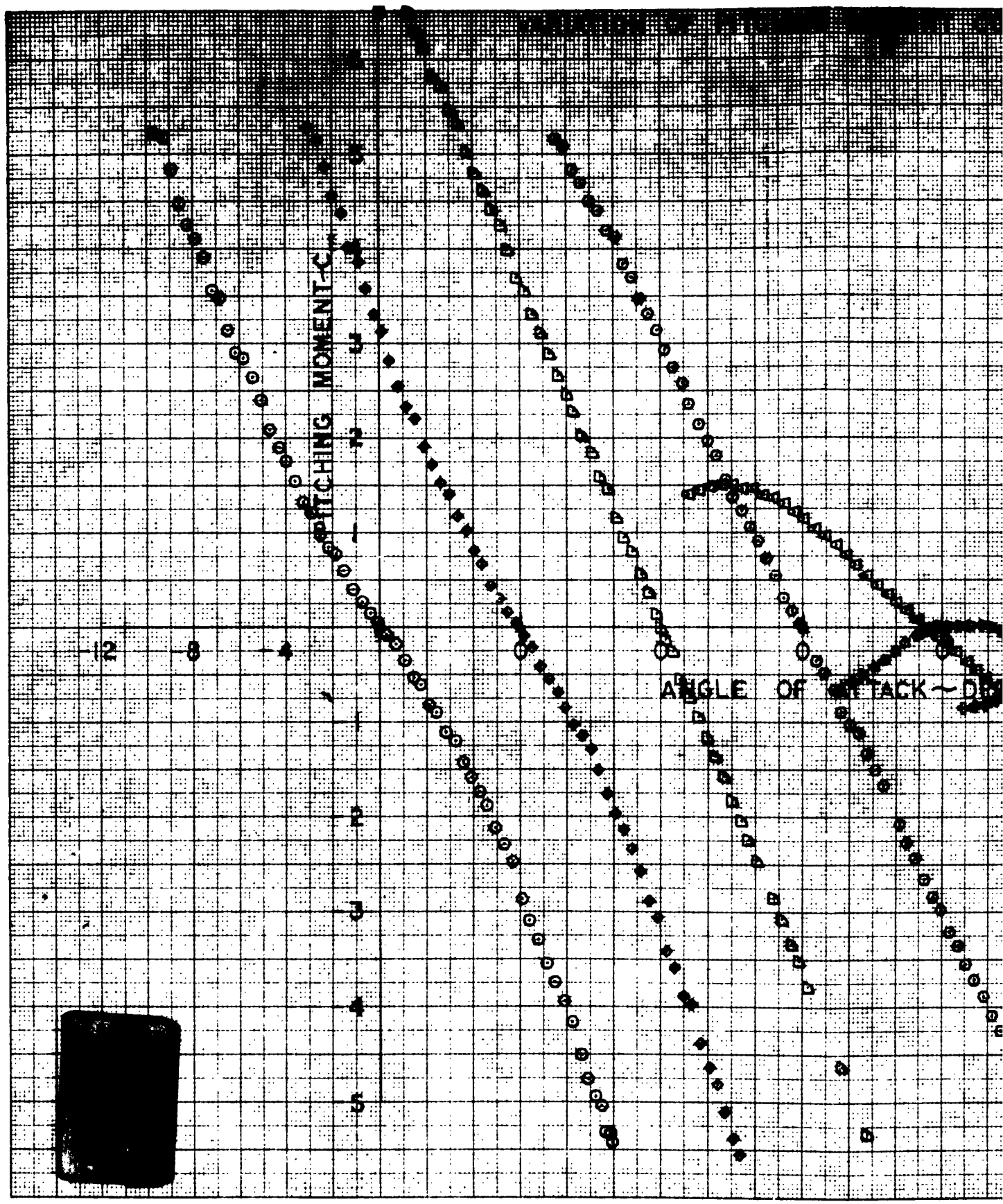

EFFICIENT WITH ANGLE OF ATTACK
0
0
0
0
4
8
12
TTACK~ DEG
CVC H$WT TEST
SYM RUN CONFIG MACH
28 B 2.0
27 3.0
26 4.0
25 5.0


VARIATION OF PITCHING MOMENT CO
PITCHING MOMENT-C_m
6
5
4
3
2
1
-1
-2
-3
-4
-5
-12
-8
-4
0
ANGLE OF ATTACK ~ DEG

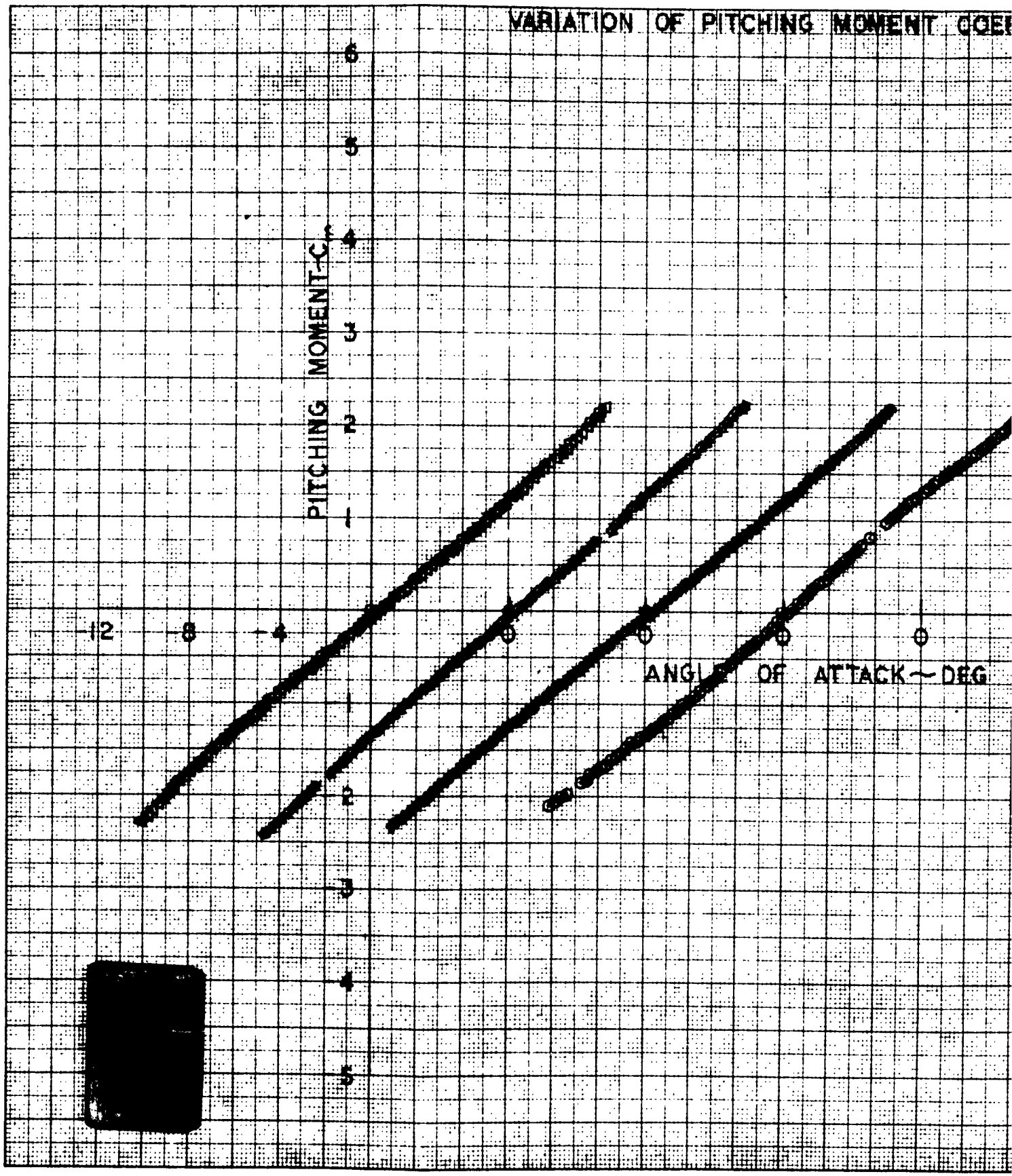

OF PITCHING MOMENT COEFFICIENT WITH ANGLE OF ATTACK
4
8
12
CYC HSWT TEST
SYM RUN CONFIG M
12
11
10
13
18
19
24

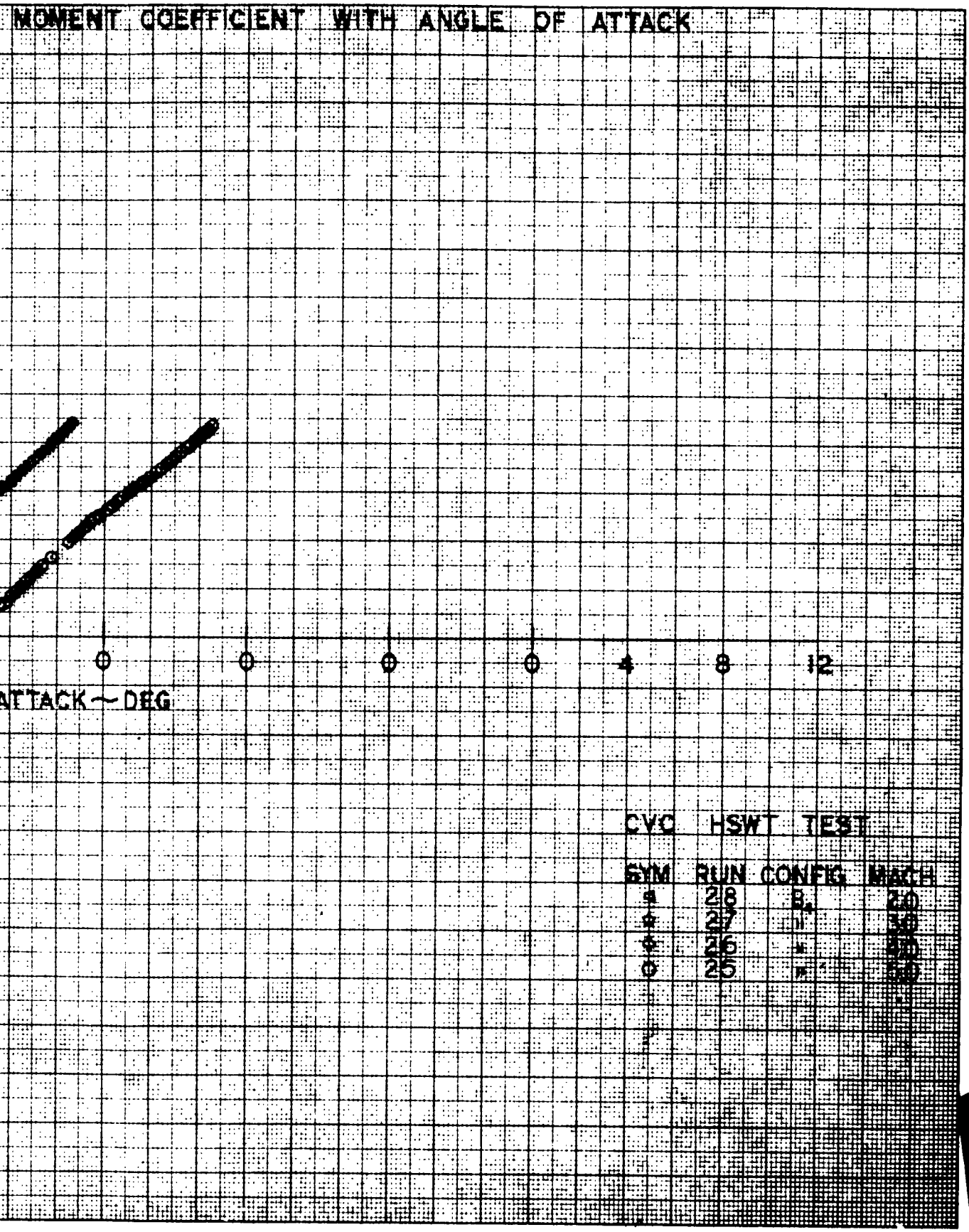
VARIATION OF PITCHING MOMENT COEFF
PITCHING MOMENT-C_m
6
5
4
3
2
1
-1
-2
-3
-4
-5
-12
-8
-4
ANGLE OF ATTACK ~ DE

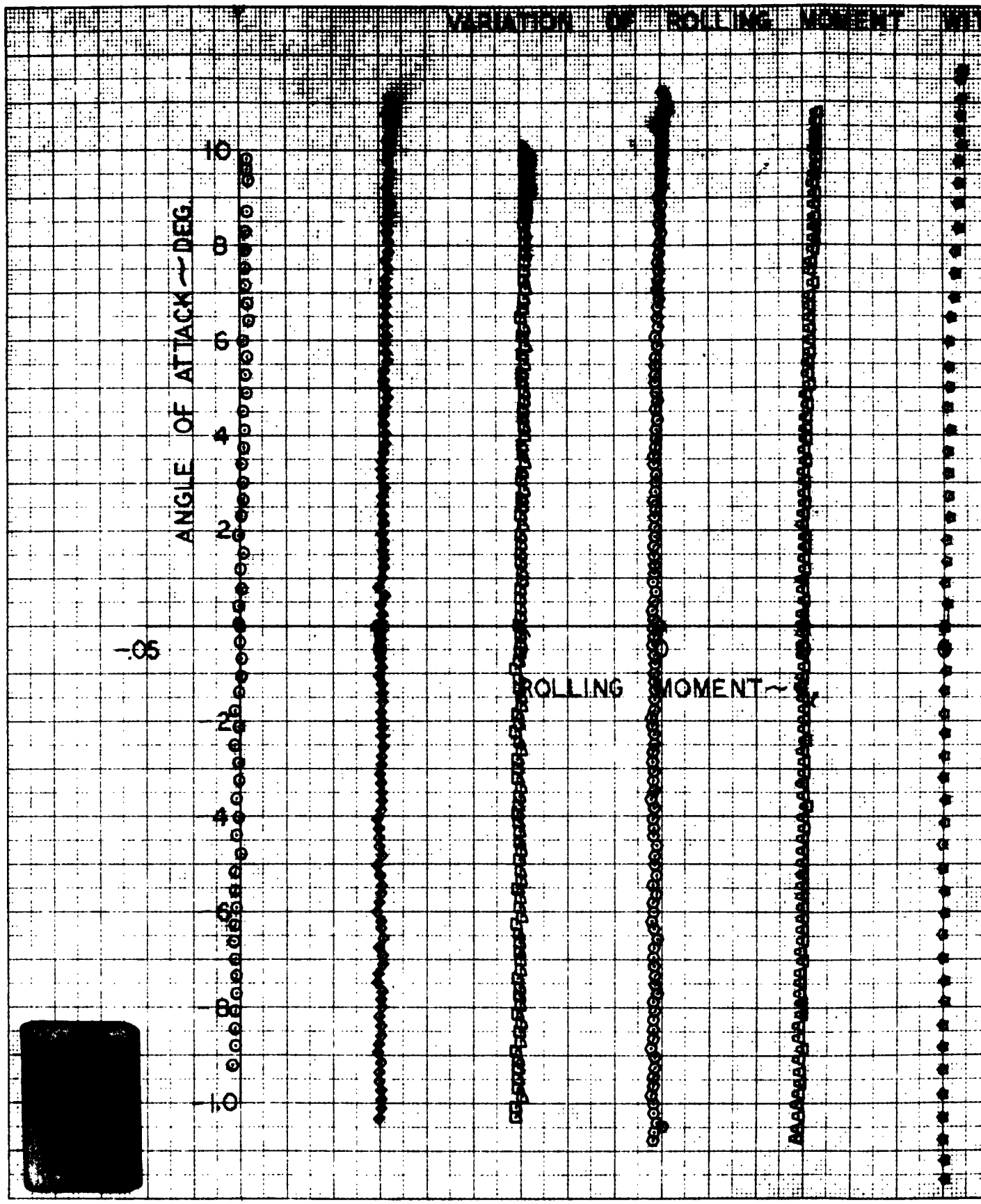

MOMENT COEFFICIENT WITH ANGLE OF ATTACK
0
0
0
0
4
8
12
TACK ~ DE
CVC HSWT TEST
SYM RUN CONFIG MACH
29 B F 5
8 " 8
9 " 10
2 " 12
14 " 20
17 " 30
20 " 40
23 " 50

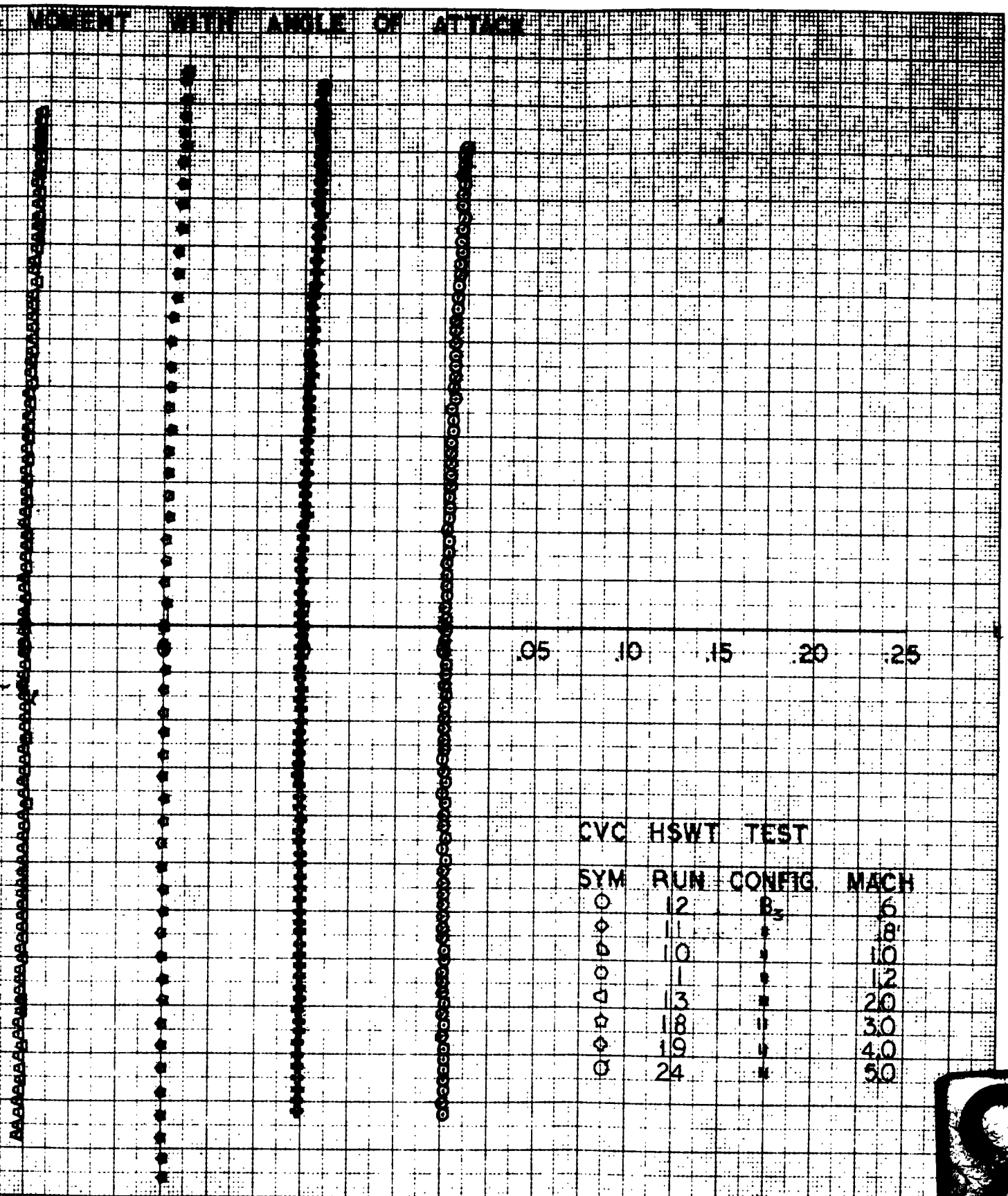

PITCHING MOMENT-C
-12
-8
-4
ANGLE OF ATTACK

GLE OF ATTACK ~ D
CVC HSWT
SYM RUN CON
6
5
4
3
15
16
21
22
$\Delta_f = 3$


VARIATION OF PITCHING MOMENT COEF
PITCHING MOMENT-C_m
6
5
4
3
2
1
-1
-2
-3
-4
-5
-12
-8
-4
0
0
0
0
ANGLE OF ATTACK ~ DEG


MOMENT COEFFICIENT WITH ANGLE OF ATTACK
0
0
0
0
4
8
12
ATTACK ~ DEG
CVC HSWT TEST
SYM RUN CONFIG MACH
28 B4 2.0
27 " 2.5
26 " 3.0
25 " 3.5


VARIATION OF ROLLING MOMENT WI
ANGLE OF ATTACK ~ DEG.
10
8
6
4
2
0
-2
-4
-6
-.08
ROLLING MOMENT ~ C


MOMENT WITH ANGLE OF ATTACK
.05
.10
.15
.20
.25
CVC HSWT TEST
SYM RUN CONFIG MACH
12 B4 .6
11 .8
10 1.0
1 1.2
13 2.0
18 3.0
19 4.0
24 5.0

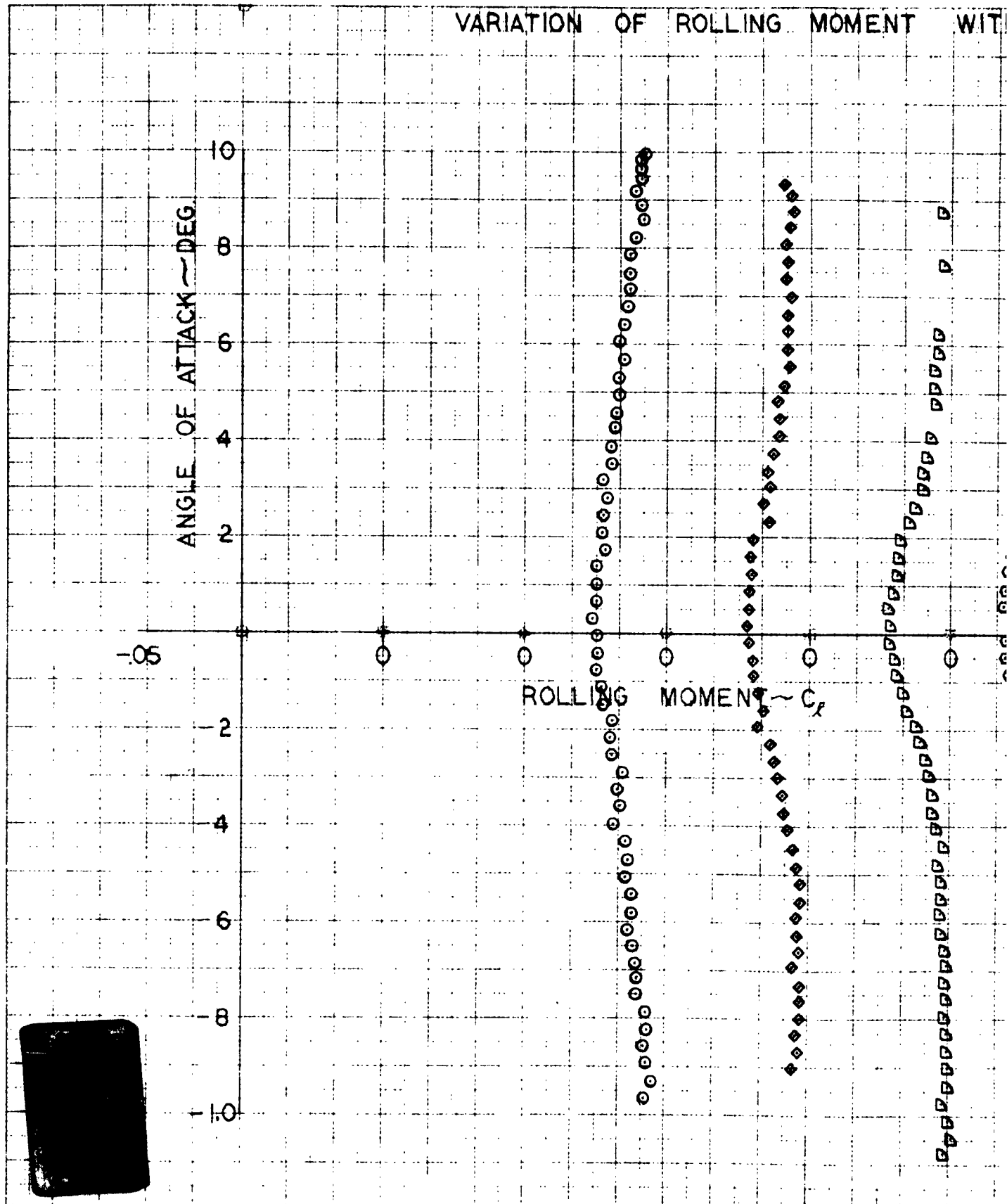
VARIATION OF ROLLING MOMENT WITH AN
ANGLE OF ATTACK — DEG.
10
8
6
4
2
0
-2
-4
-6
-8
-10
-.05
0
ROLLING MOMENT ~ C'

MENT WITH ANGLE OF ATTACK

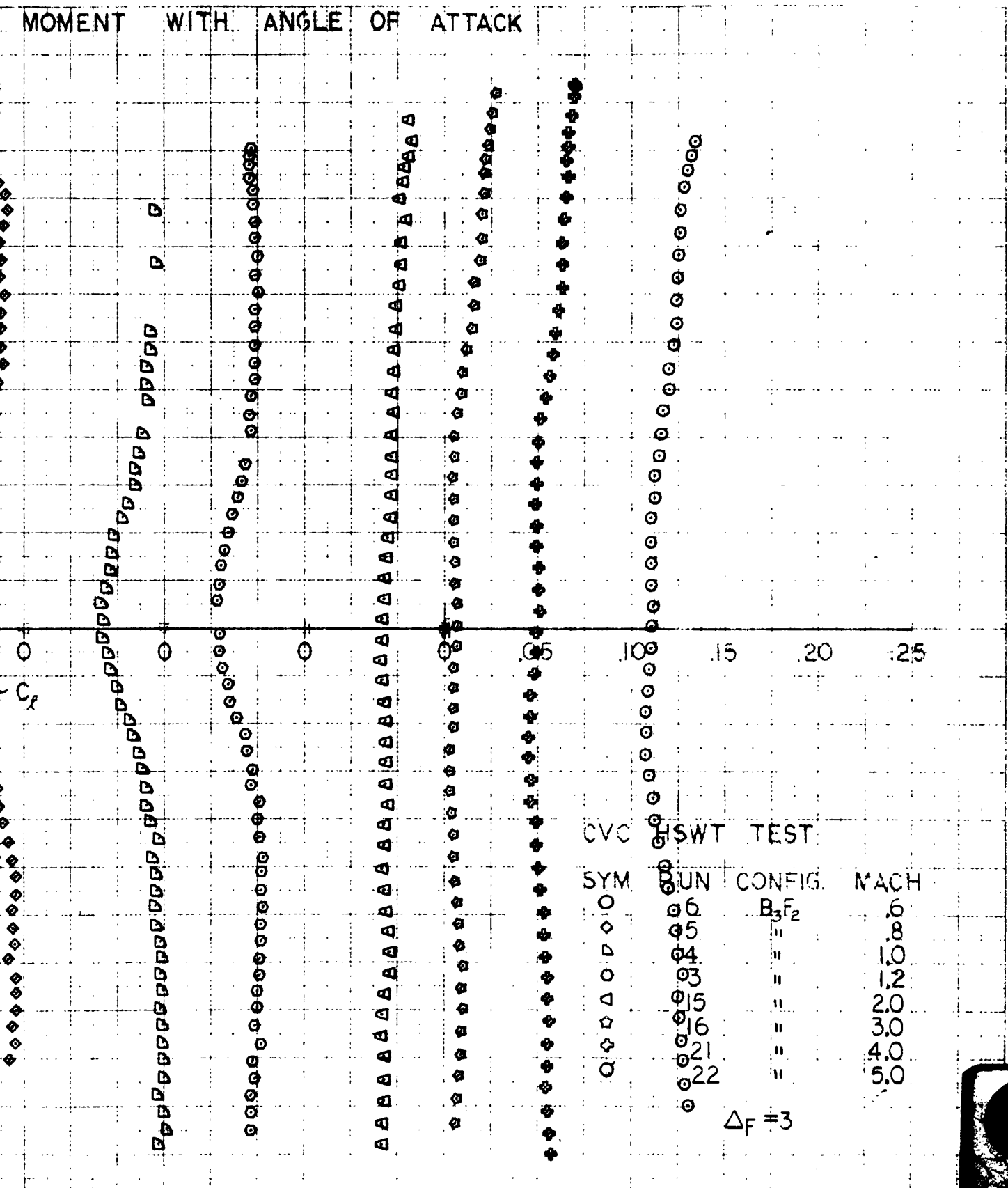
.05 .10 .15 .20 .25

CVC HSWT TEST

SYM	RUN	CONFIG	MACH
○	29	B_3F_2	.6
◇	8	"	.8
▷	9	"	1.0
○	2	"	1.2
◁	14	"	2.0
☆	17	"	3.0
◇	20	"	4.0
○	23	"	5.0


VARIATION OF ROLLING MOMENT WIT
ANGLE OF ATTACK ~ DEG.
10
8
6
4
2
-.05
0
0
0
0
0
ROLLING MOMENT ~ C_l
2
4
6
8
10

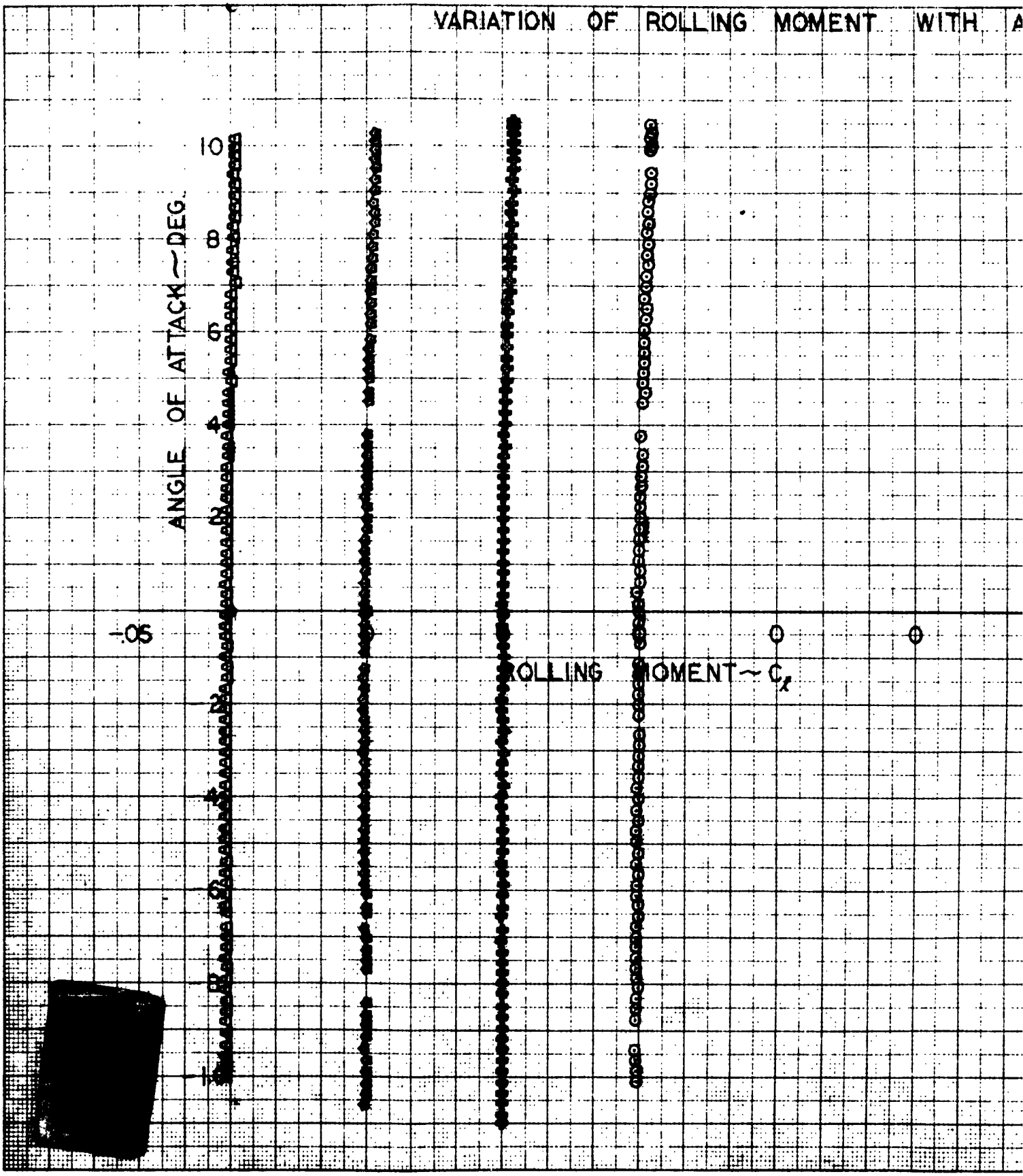
MOMENT WITH ANGLE OF ATTACK



CVC HSWT TEST

SYM	RUN	CONFIG.	MACH
○	6	B_3F_2	.6
◇	5	"	.8
△	4	"	1.0
○	3	"	1.2
△	15	"	2.0
☆	16	"	3.0
◇	21	"	4.0
○	22	"	5.0

$\Delta_F = 3$

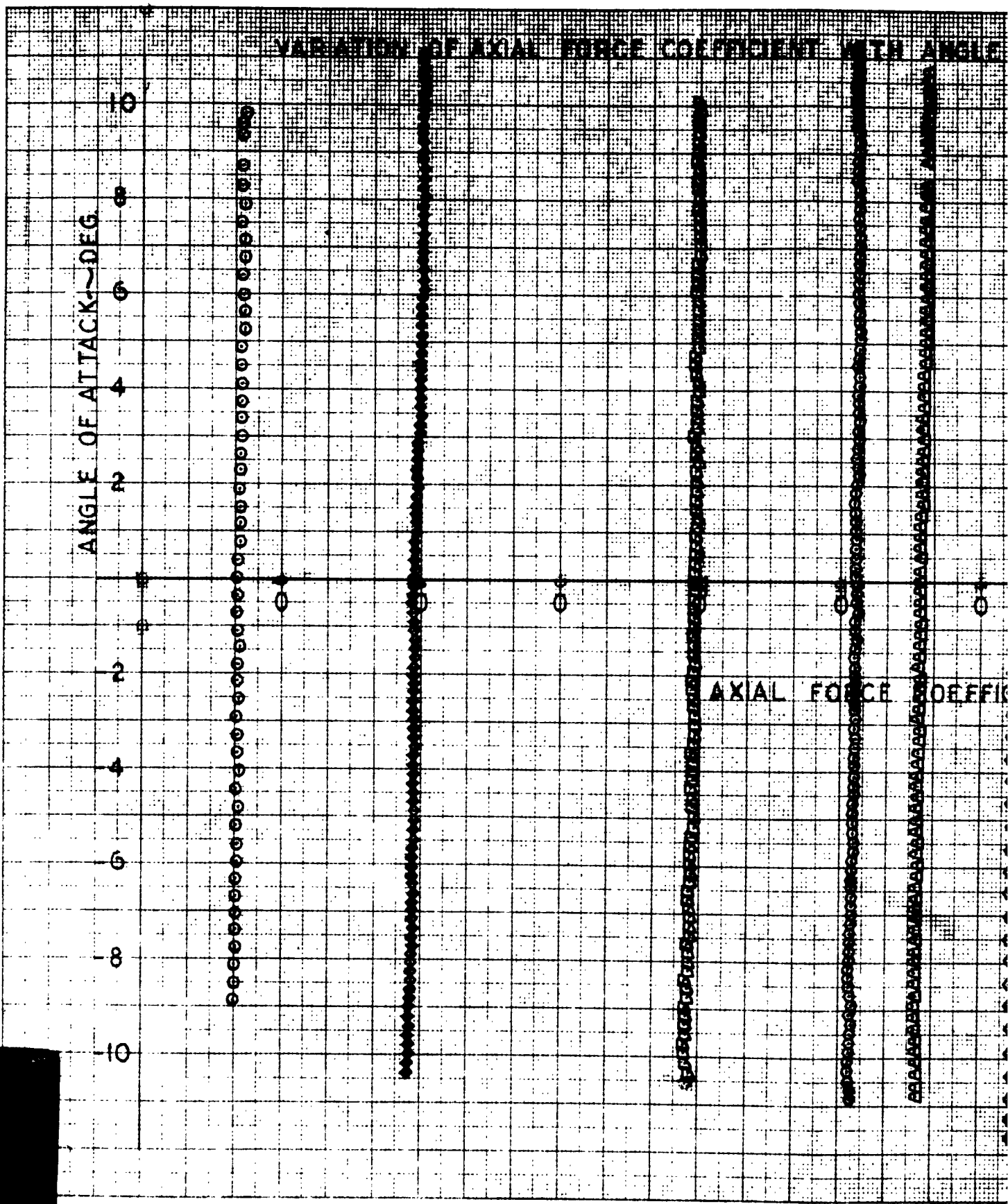

VARIATION OF ROLLING MOMENT WITH A
ANGLE OF ATTACK ~ DEG.
10
8
6
4
2
0
-2
-4
-.05
0
0
ROLLING MOMENT ~ C_l

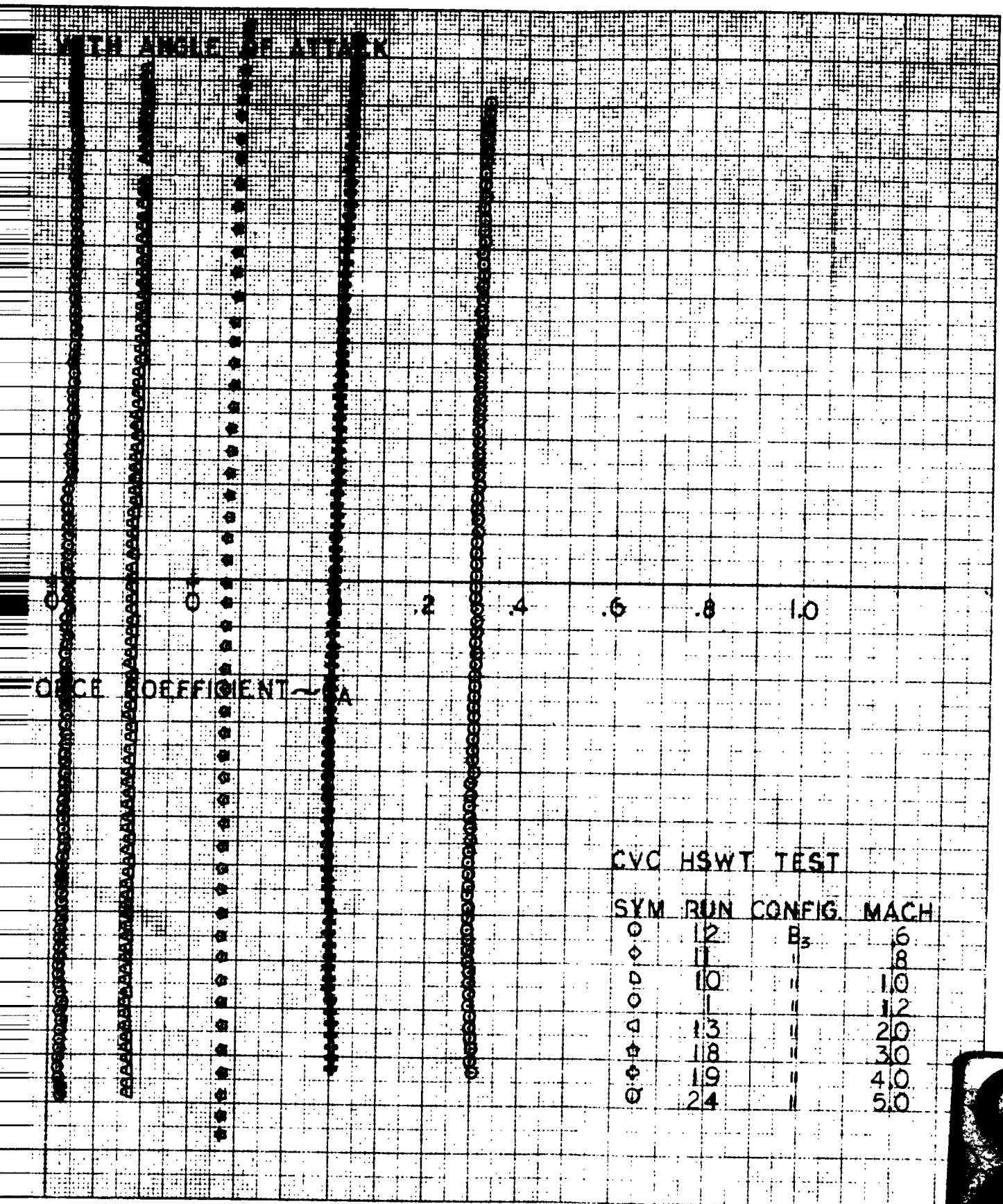
MENT WITH ANGLE OF ATTACK

0 0 0 .05 .10 .15 .20 .25

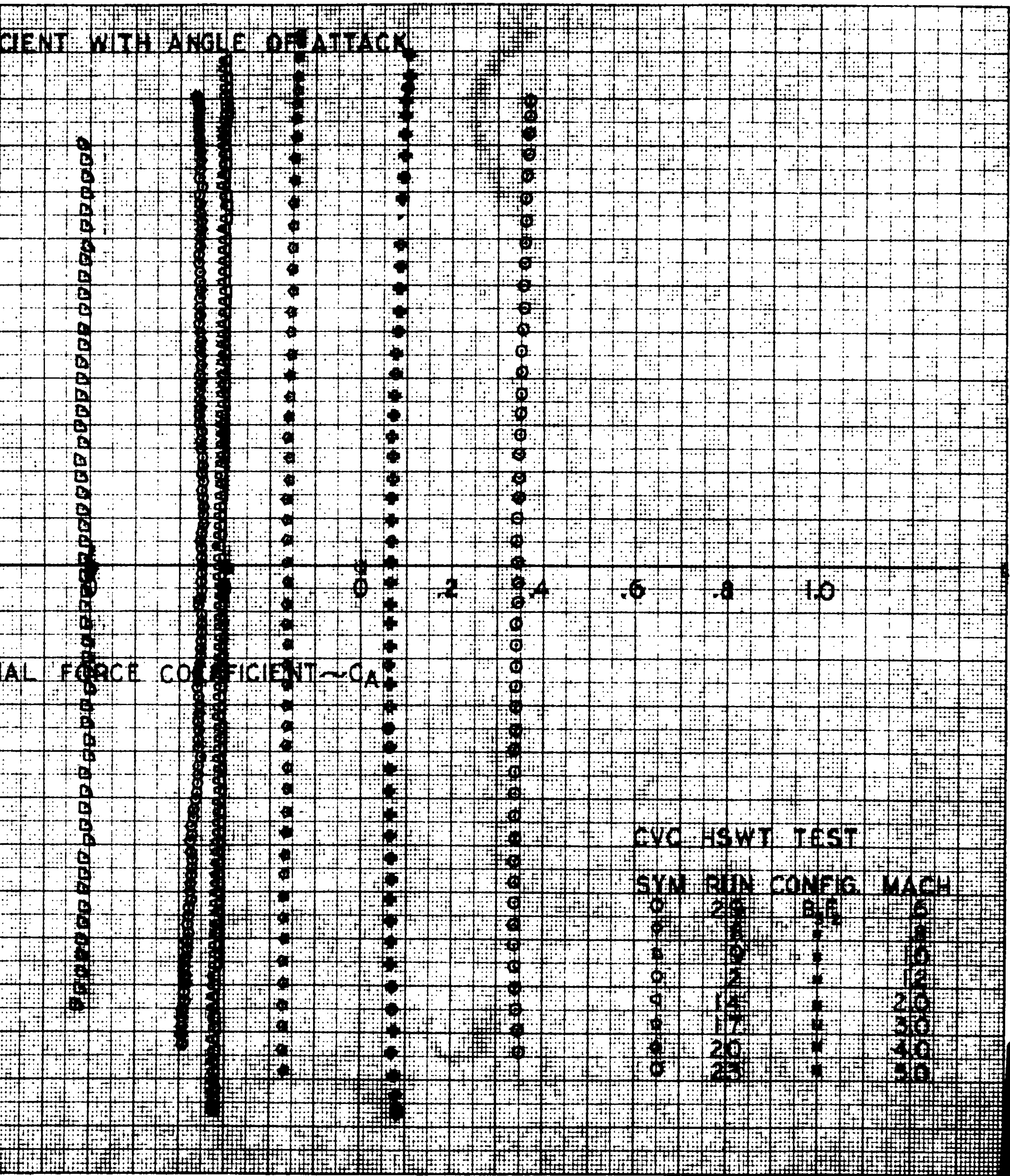
CVC HSWT TEST

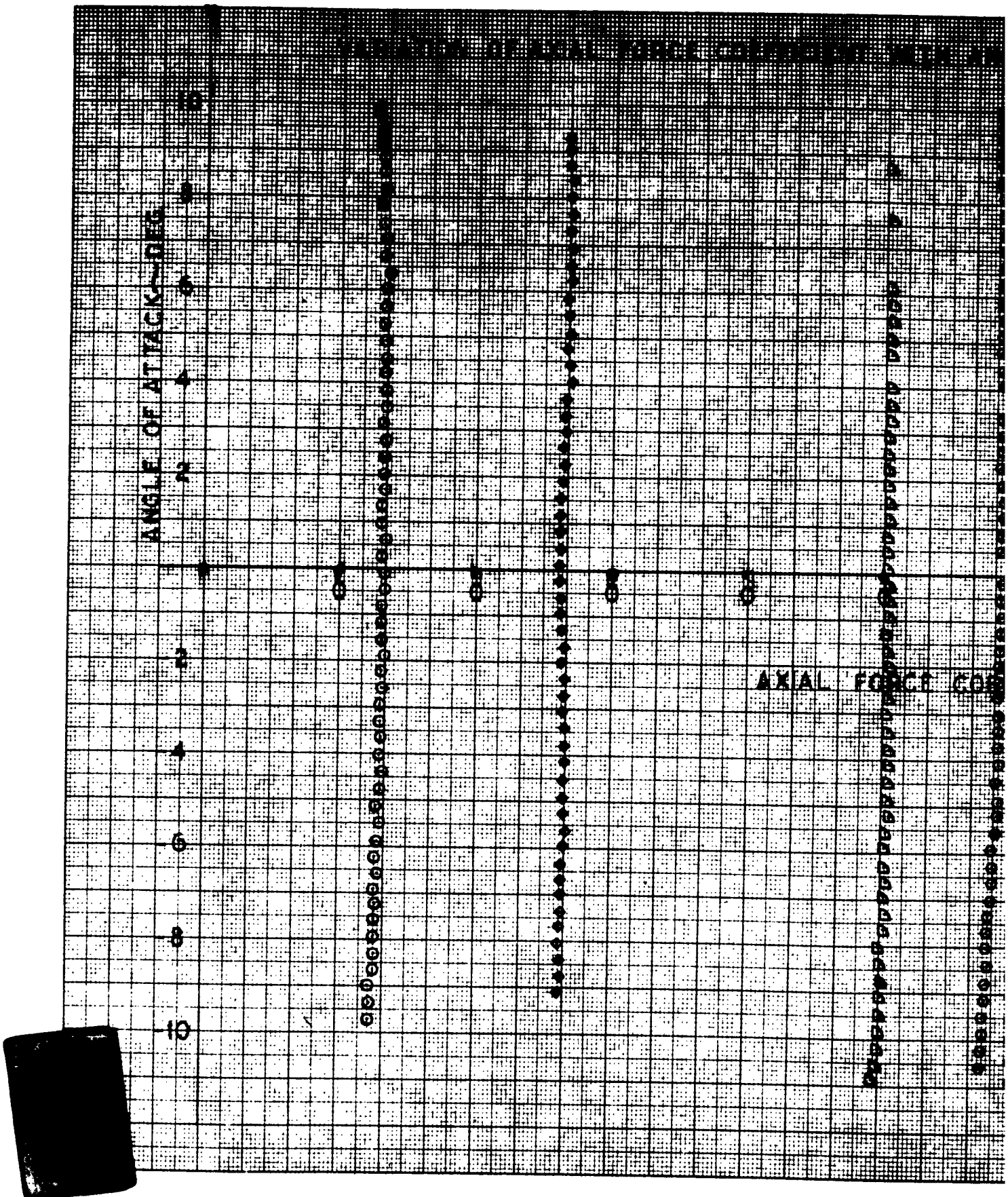
SYM	RUN	CONFIG.	MACH
◁	28	B_4	20
☆	27	"	30
◇	26	"	40
○	25	"	50

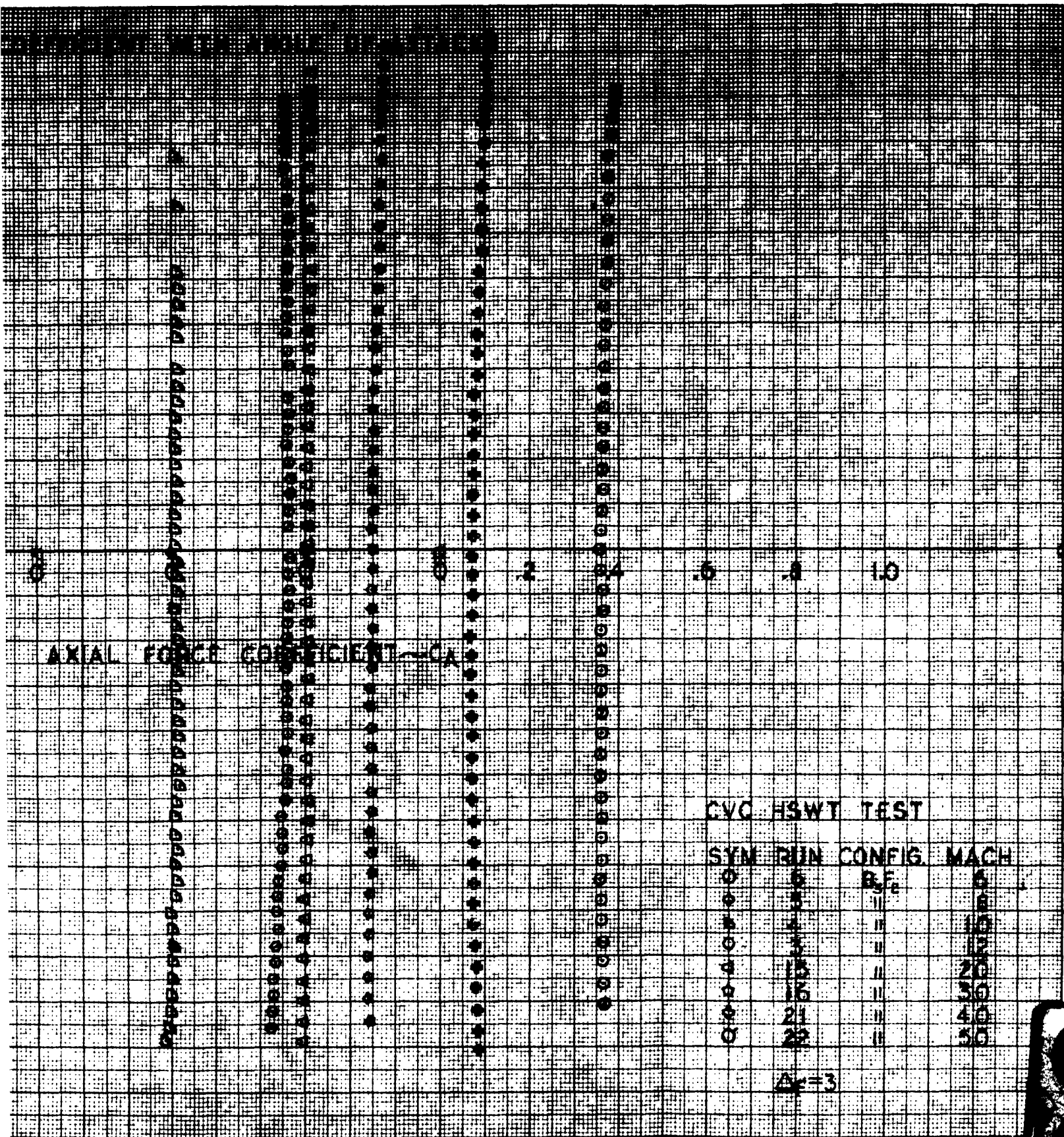

VARIATION OF AXIAL FORCE COEFFICIENT WITH ANGLE
ANGLE OF ATTACK—DEG.
10
8
6
4
2
0
2
4
6
8
10
AXIAL FORCE COEFFI


TH ANGLE OF ATTACK
0
.2
.4
.6
.8
1.0
CE COEFFICIENT ~ CA
CYC HSWT TEST
SYM RUN CONFIG. MACH
12 B3 .6
11 " .8
10 " 1.0
1 " 1.2
13 " 2.0
18 " 3.0
19 " 4.0
24 " 5.0

VARIATION OF AXIAL FORCE COEFFICIENT WITH ANGLE OF
ANGLE OF ATTACK — DEG.
10
8
6
4
2
0
2
4
6
8
10
AXIAL FORCE COEFFICIENT


CIENT WITH ANGLE OF ATTACK
0
.2
.4
.6
.8
1.0
IAL FORCE COEFFICIENT ~ C_A
CVC HSWT TEST
SYM RUN CONFIG MACH


ANGLE OF ATTACK-DEG
AXIAL FORCE COE


0
.2
.4
.6
.8
1.0
AXIAL FORCE COEFFICIENT—CA
CVC HSWT TEST
SYM RUN CONFIG. MACH
B_2F_2
6
10
12
20
30
40
50
Δ_x=3

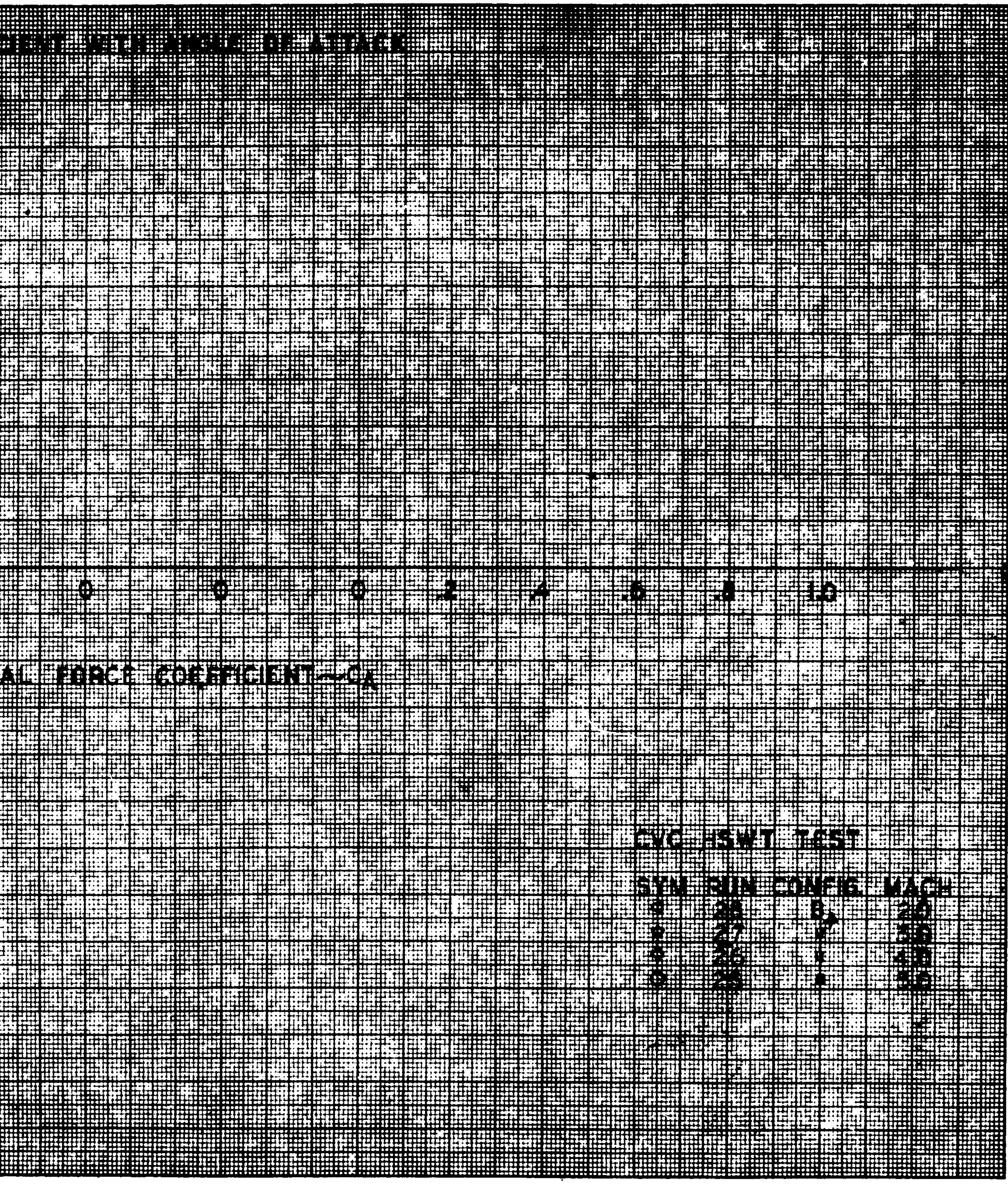
VARIATION OF AXIAL FORCE COEFFICIENT WITH ANGLE

ANGLE OF ATTACK, DEG

10
8
6
4
2
0
-2
-4
-6
-8
-10

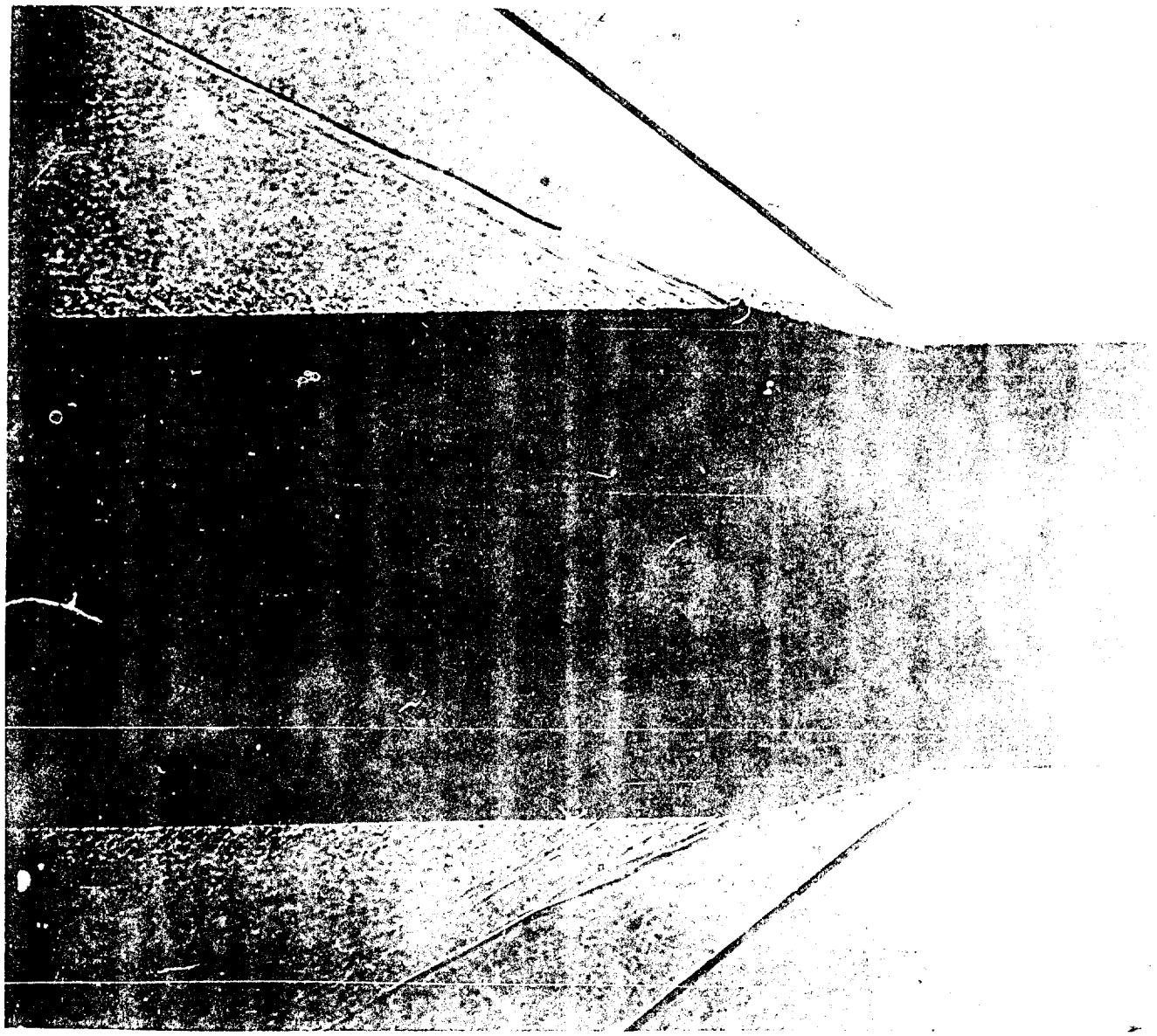
0 0 0

AXIAL FORCE COEFFIC


WITH ANGLE OF ATTACK
0 0 0 .2 .4 .6 .8 1.0
FORCE COEFFICIENT ~ C_A
CVC HSWT TEST
SYM RUN CONFIG. MACH

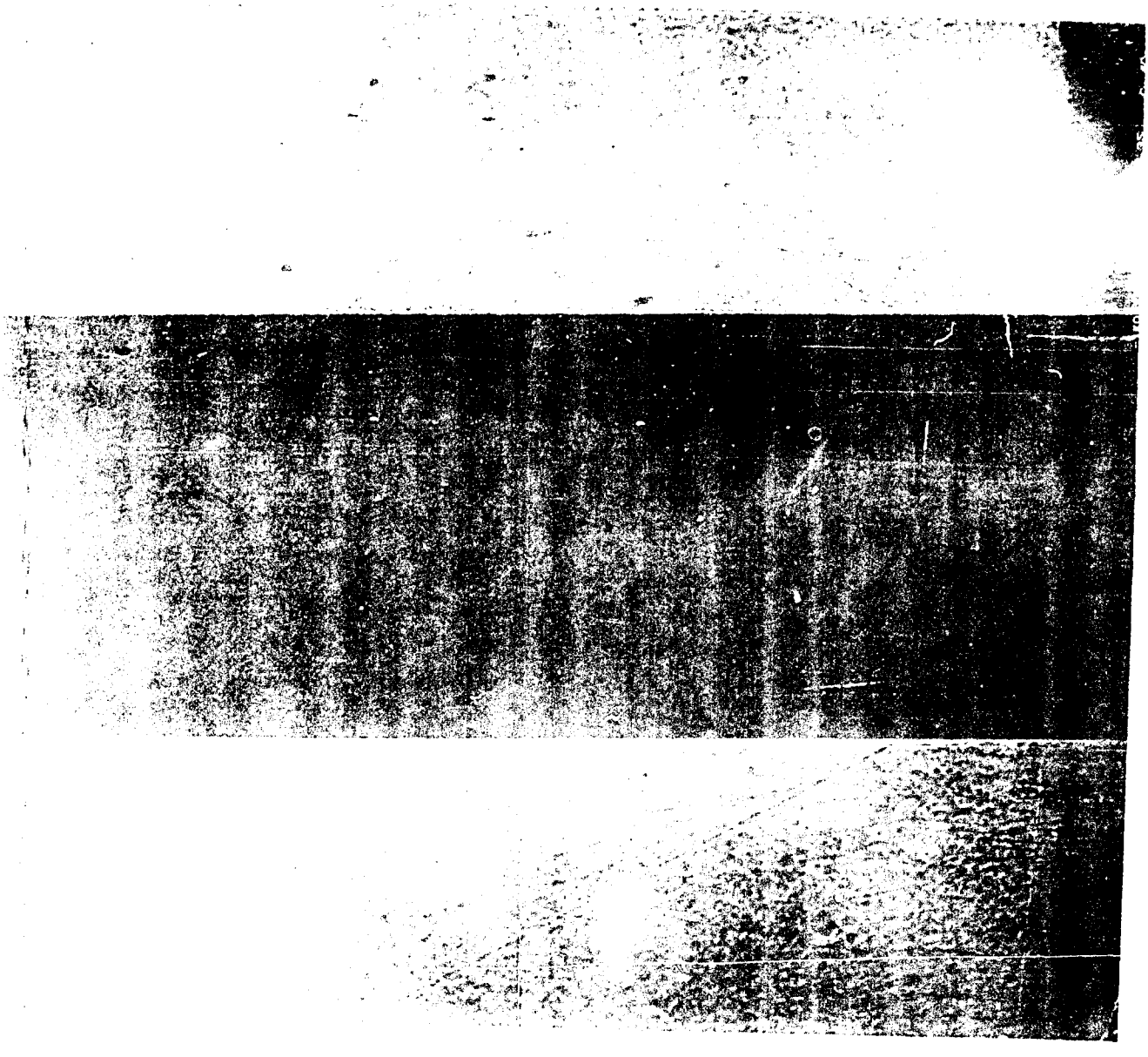
APPENDIX IV

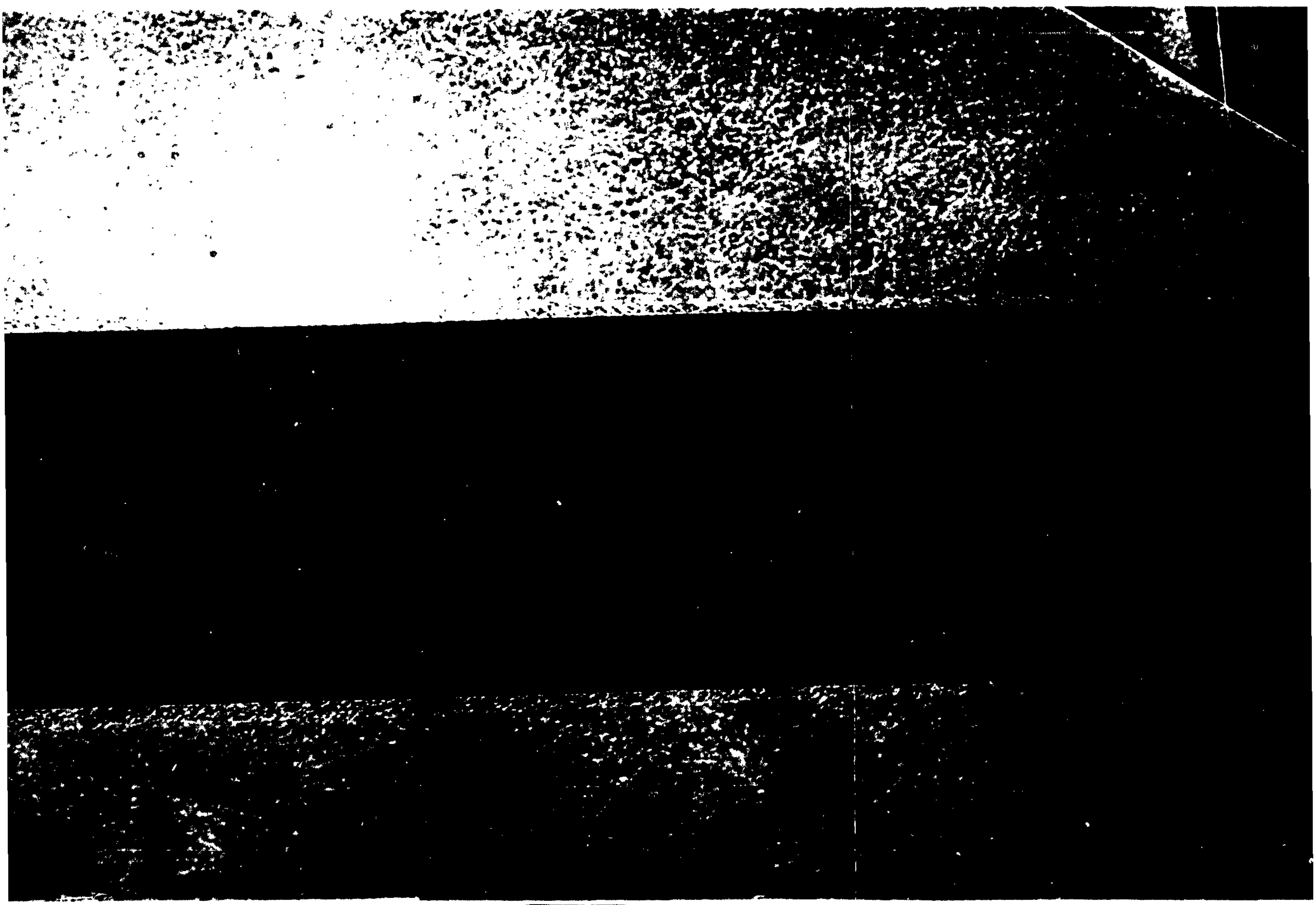
SCHLERIN PHOTOGRAPHS



1

2

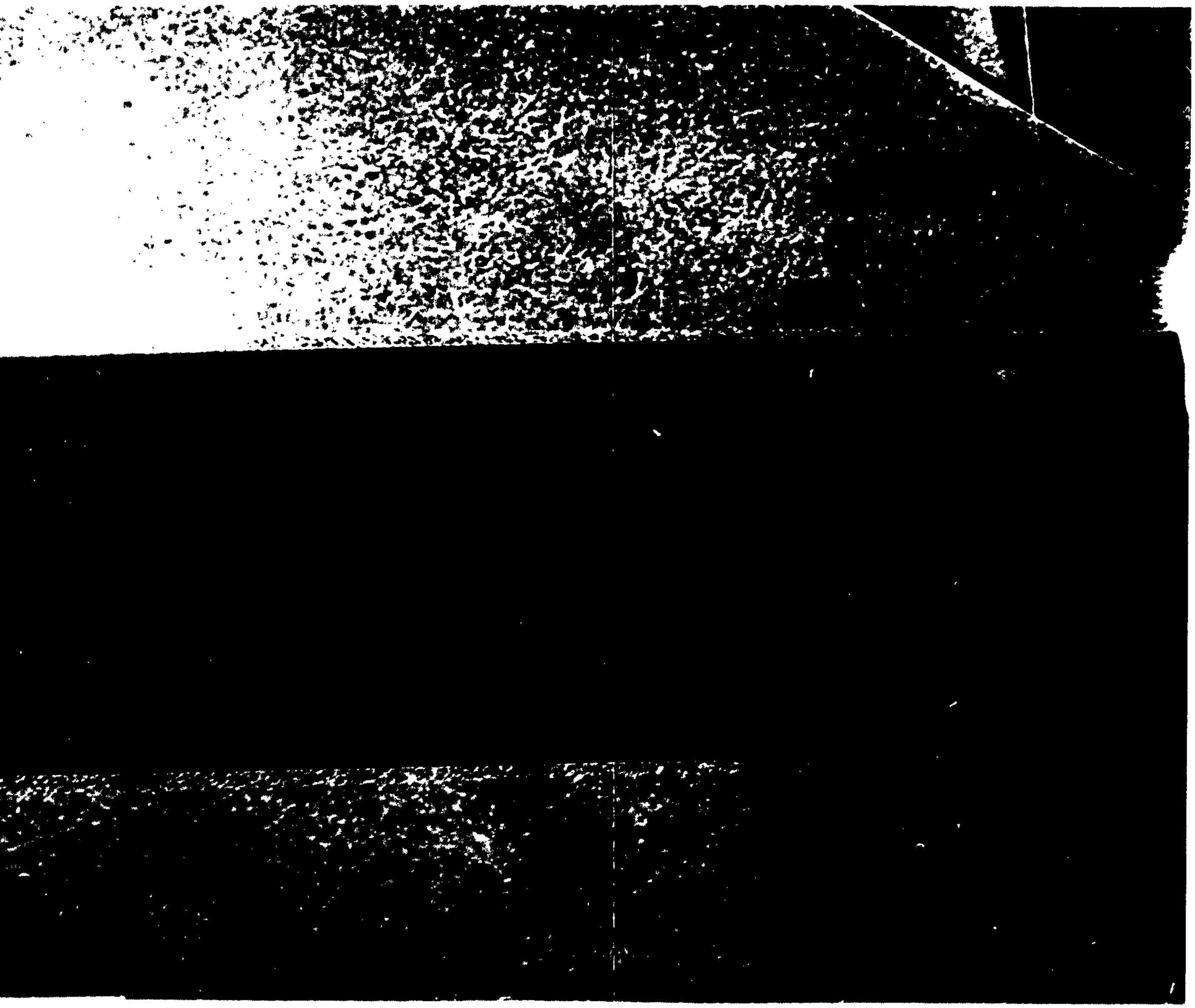




Run 27

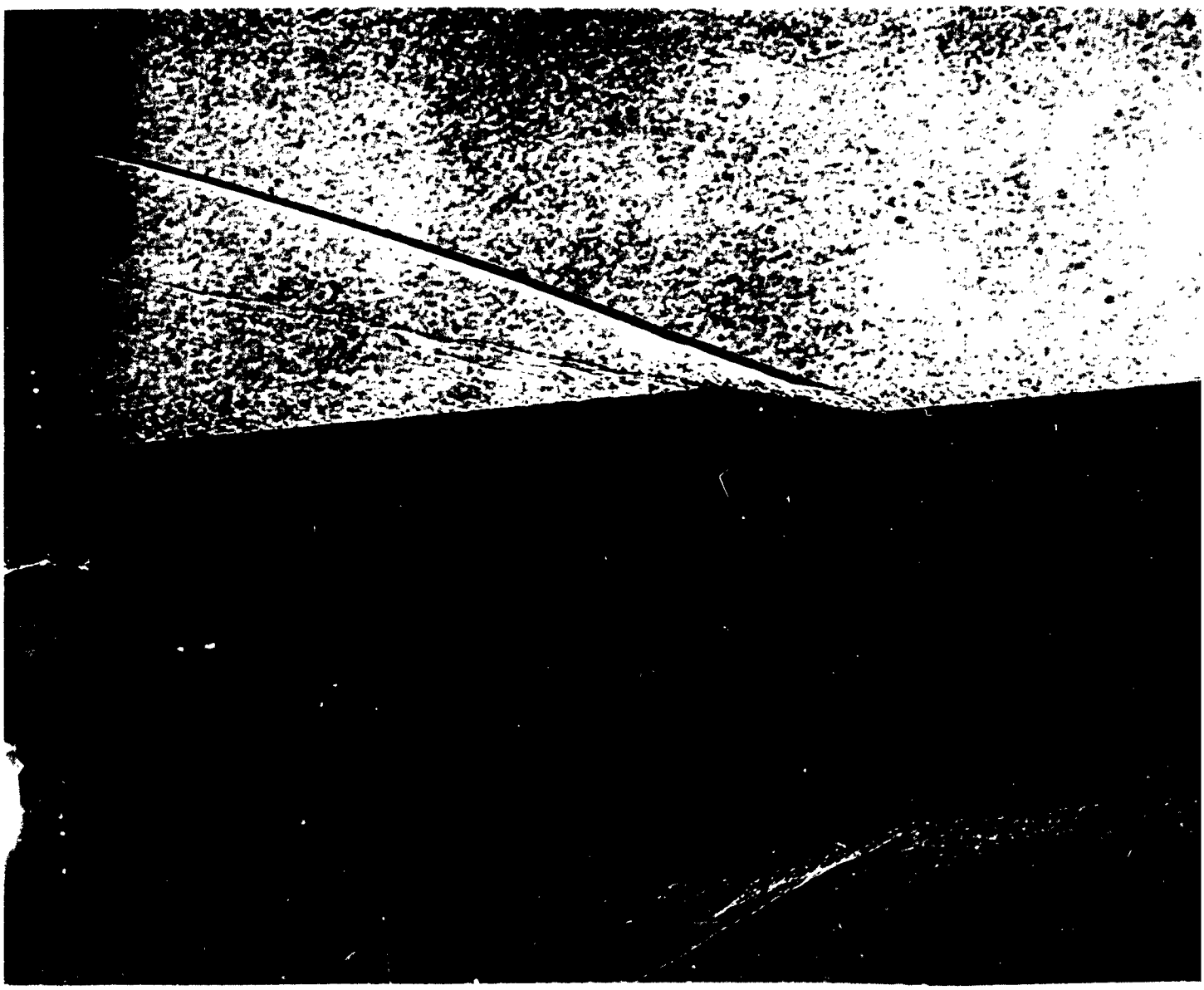
Mach 3.0

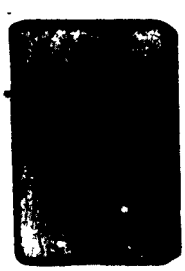
2

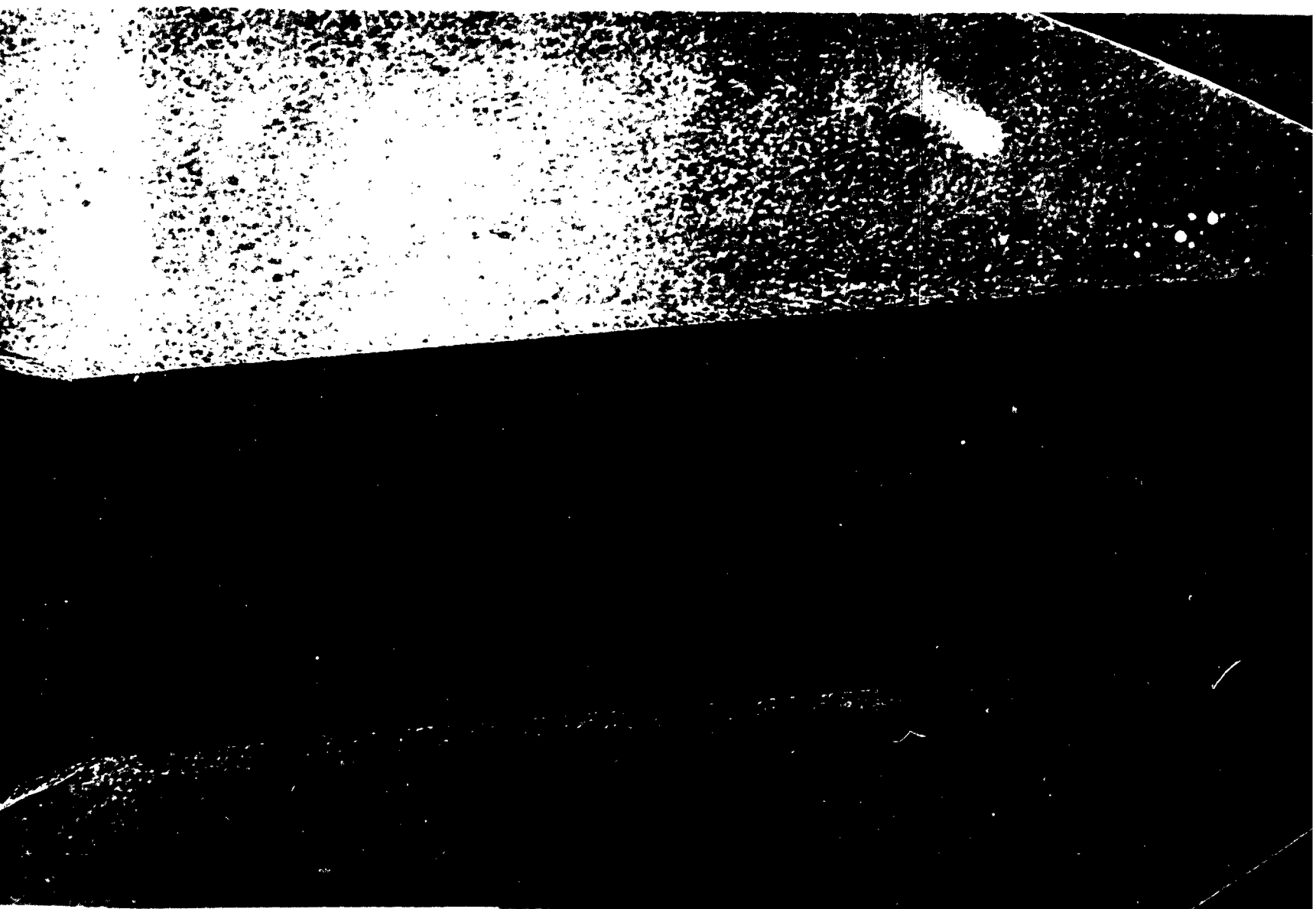


n 27
ch 3.0

3

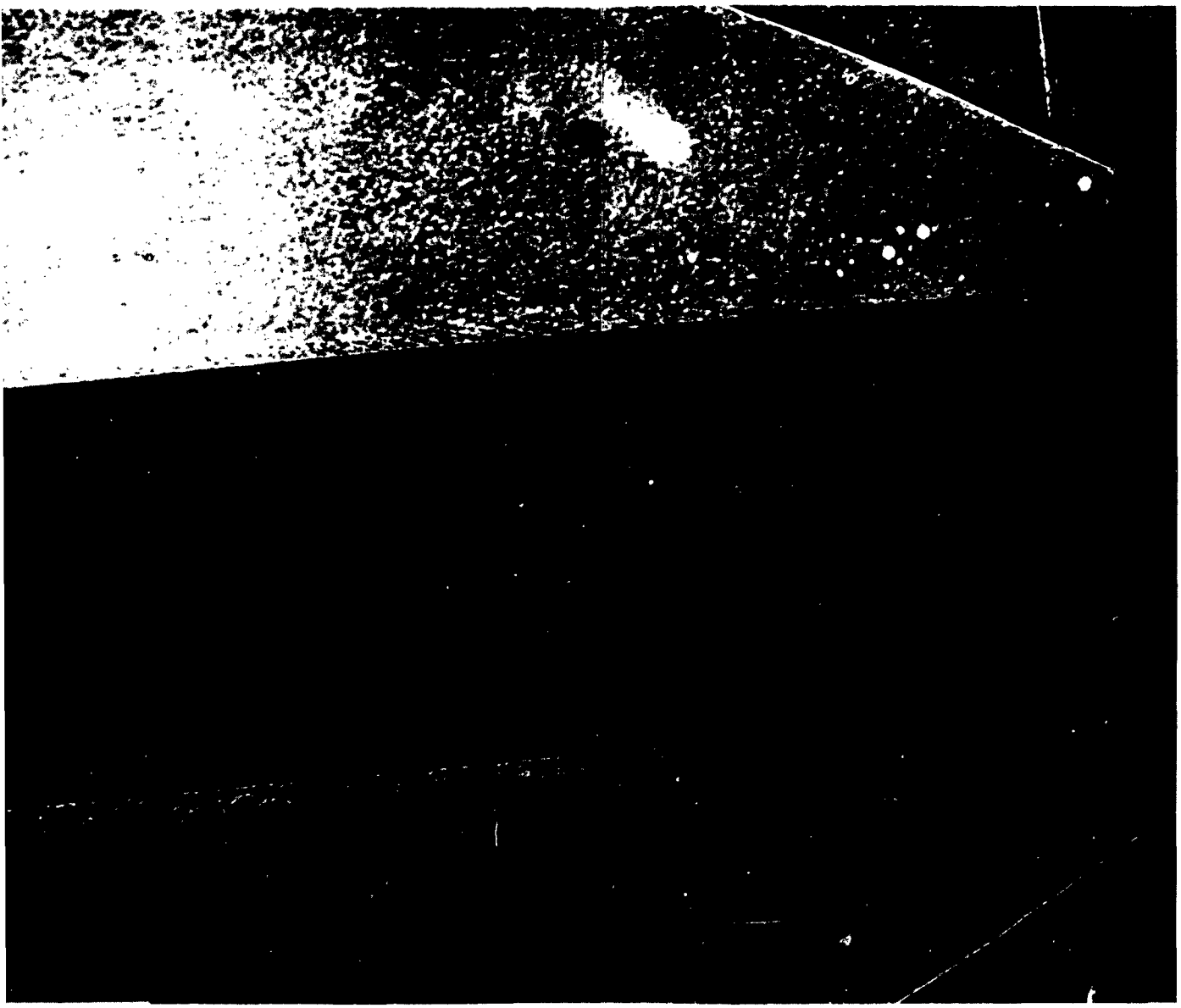






Run 26
Mach 4.0

2



Run 26
Mach 4.0

3

APPENDIX V

TABULATED DATA

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 — HSWT TEST 89

RUN 001 MACH NO 1.247 RN/L 07374596 Q 1485 PSF TO 563 — 10/17/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
00.12	0.0045	-00.041	0.0032	0.6276	0.6276	0.7674	0.0161	-0.0576	-0.0048	0.1397	-27.817	024.42	005
00.14	0.0080	-00.032	0.0065	0.6273	0.6273	0.7638	0.0126	-0.0580	-0.0050	0.1365	-12.037	024.45	006
-11.21	-0.9598	-03.181	-0.8206	0.7968	0.6220	0.7972	0.1082	0.0691	-0.0049	0.1752	10.069	024.38	007
-11.02	-0.9300	-03.141	-0.7942	0.7870	0.6208	0.7956	0.0974	0.0592	-0.0042	0.1748	10.263	024.32	008
-10.79	-0.9043	-03.065	-0.7719	0.7801	0.6218	0.7934	0.1030	0.0733	-0.0045	0.1716	10.298	024.35	009
-10.63	-0.8779	-03.014	-0.7482	0.7728	0.6216	0.7930	0.1025	0.0575	-0.0054	0.1714	10.429	024.38	010
-10.43	-0.8577	-02.952	-0.7315	0.7641	0.6189	0.7893	0.1150	0.0372	-0.0032	0.1704	10.457	024.45	011
-10.22	-0.8344	-02.899	-0.7114	0.7570	0.6188	0.7878	0.1076	0.0347	-0.0045	0.1690	10.555	024.51	012
-10.03	-0.8113	-02.846	-0.6909	0.7522	0.6204	0.7866	0.1067	0.0406	-0.0049	0.1662	10.658	024.58	013
-09.84	-0.7890	-02.805	-0.6714	0.7465	0.6208	0.7863	0.1061	0.0324	-0.0062	0.1655	10.801	024.61	014
-09.64	-0.7672	-02.751	-0.6522	0.7416	0.6219	0.7865	0.1019	0.0521	-0.0051	0.1646	10.895	024.55	015
-09.45	-0.7498	-02.701	-0.6376	0.7362	0.6216	0.7874	0.1016	0.0584	-0.0054	0.1658	10.945	024.45	016
-09.25	-0.7257	-02.635	-0.6160	0.7322	0.6236	0.7874	0.0976	0.0497	-0.0043	0.1639	11.032	024.32	017
-09.03	-0.7033	-02.563	-0.5969	0.7248	0.6221	0.7854	0.0999	0.0426	-0.0036	0.1634	11.071	024.26	018
-08.86	-0.6774	-02.525	-0.5727	0.7240	0.6271	0.7868	0.0926	0.0482	-0.0063	0.1597	11.323	024.16	019
-08.65	-0.6667	-02.471	-0.5656	0.7148	0.6216	0.7817	0.0814	0.0460	-0.0051	0.1601	11.261	024.16	020
-08.46	-0.6425	-02.406	-0.5443	0.7079	0.6201	0.7775	0.0800	0.0523	-0.0047	0.1575	11.375	024.26	021
-08.27	-0.6141	-02.337	-0.5186	0.7019	0.6201	0.7757	0.0855	0.0451	-0.0047	0.1556	11.563	024.38	022
-08.08	-0.5952	-02.278	-0.5021	0.6979	0.6204	0.7761	0.0777	0.0571	-0.0043	0.1557	11.628	024.45	023
-07.90	-0.5689	-02.226	-0.4782	0.6935	0.6212	0.7751	0.0735	0.0412	-0.0046	0.1539	11.890	024.51	024
-07.71	-0.5515	-02.166	-0.4630	0.6904	0.6220	0.7755	0.0695	0.0180	-0.0028	0.1535	11.931	024.51	025
-07.53	-0.5317	-02.116	-0.4455	0.6874	0.6231	0.7764	0.0755	0.0187	-0.0041	0.1533	12.092	024.48	026
-07.34	-0.5149	-02.083	-0.4310	0.6841	0.6234	0.7755	0.0745	0.0328	-0.0040	0.1521	12.288	024.45	027
-07.13	-0.4942	-02.022	-0.4128	0.6810	0.6244	0.7748	0.0640	0.0085	-0.0052	0.1503	12.431	024.42	028
-06.95	-0.4802	-01.978	-0.4012	0.6770	0.6234	0.7738	0.0632	0.0080	-0.0052	0.1503	12.512	024.42	029
-06.77	-0.4679	-01.931	-0.3911	0.6750	0.6242	0.7735	0.0592	0.0069	-0.0054	0.1494	12.540	024.35	030
-06.59	-0.4492	-01.883	-0.3746	0.6721	0.6247	0.7728	0.0615	0.0068	-0.0035	0.1481	12.731	024.38	031
-06.35	-0.4273	-01.834	-0.3556	0.6681	0.6246	0.7707	0.0574	-0.0016	-0.0050	0.1460	13.039	024.42	032
-06.22	-0.4114	-01.790	-0.3416	0.6632	0.6223	0.7686	0.0533	0.0115	-0.0061	0.1463	13.218	024.51	033
-06.03	-0.3932	-01.746	-0.3255	0.6628	0.6250	0.7695	0.0565	-0.0100	-0.0046	0.1445	13.486	024.51	034
-05.83	-0.3835	-01.697	-0.3180	0.6614	0.6257	0.7700	0.0563	-0.0106	-0.0046	0.1443	13.446	024.48	035
-05.63	-0.3624	-01.664	-0.2990	0.6612	0.6287	0.7714	0.0593	-0.0176	-0.0031	0.1427	13.948	024.42	036
-05.43	-0.3493	-01.615	-0.2881	0.6602	0.6300	0.7711	0.0590	-0.0108	-0.0052	0.1412	14.049	024.35	037
-05.24	-0.3385	-01.572	-0.2798	0.6556	0.6273	0.7685	0.0652	-0.0171	-0.0034	0.1412	14.108	024.35	038
-05.01	-0.3183	-01.518	-0.2623	0.6520	0.6266	0.7646	0.0548	-0.0340	-0.0041	0.1380	14.485	024.48	039
-04.84	-0.3031	-01.470	-0.2491	0.6503	0.6269	0.7651	0.0579	-0.0484	-0.0039	0.1381	14.730	024.55	040
-04.62	-0.2926	-01.435	-0.2412	0.6485	0.6270	0.7661	0.0505	-0.0215	-0.0035	0.1391	14.896	024.55	041
-04.43	-0.2751	-01.400	-0.2255	0.6505	0.6311	0.7666	0.0502	-0.0147	-0.0048	0.1355	15.461	024.51	042
-04.26	-0.2809	-01.323	-0.2334	0.6491	0.6300	0.7659	0.0432	-0.0022	-0.0051	0.1359	14.307	024.45	043
-04.06	-0.2510	-01.298	-0.2058	0.6461	0.6299	0.7646	0.0459	0.0053	-0.0053	0.1347	15.704	024.48	044
-03.84	-0.2370	-01.239	-0.1941	0.6455	0.6311	0.7660	0.0628	-0.0355	-0.0043	0.1349	15.888	024.45	045
-03.65	-0.2269	-01.197	-0.1864	0.6421	0.6289	0.7631	0.0419	-0.0035	-0.0059	0.1341	16.024	024.42	046
-03.46	-0.2130	-01.147	-0.1745	0.6424	0.6307	0.7657	0.0282	-0.0069	-0.0042	0.1350	16.363	024.35	047
-03.27	-0.2032	-01.088	-0.1668	0.6422	0.6317	0.7644	0.0276	0.0144	-0.0054	0.1328	16.275	024.32	048
-03.05	-0.1891	-01.029	-0.1553	0.6384	0.6293	0.7627	0.0406	0.0021	-0.0037	0.1334	16.532	024.29	049
-02.86	-0.1789	-00.977	-0.1471	0.6399	0.6317	0.7637	0.0434	0.0238	-0.0047	0.1320	16.593	024.29	050
-02.67	-0.1565	-00.921	-0.1270	0.6378	0.6312	0.7615	0.0264	0.0054	-0.0049	0.1303	17.866	024.32	051
-02.50	-0.1567	-00.869	-0.1291	0.6359	0.6297	0.7610	0.0430	0.0007	-0.0043	0.1313	16.838	024.38	052
-02.29	-0.1422	-00.824	-0.1169	0.6362	0.6310	0.7633	0.0395	-0.0080	-0.0041	0.1323	17.609	024.38	053
-02.12	-0.1312	-00.769	-0.1078	0.6353	0.6309	0.7608	0.0357	-0.0021	-0.0047	0.1299	17.803	024.48	054
-01.96	-0.1248	-00.712	-0.1032	0.6331	0.6292	0.7612	0.0357	-0.0171	-0.0056	0.1321	17.324	024.45	055

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 HSWT TEST 89

RUN 001 MACH NO 1.247 RN/L 07374596 Q 1485 PSF TO 563

10/17/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
-01.77	-0.1144	-00.650	-0.0948	0.6336	0.6304	0.7616	0.0382	0.0114	-0.0045	0.1312	17.266	024.51	056
-01.56	-0.0996	-00.588	-0.0825	0.6308	0.6283	0.7596	0.0417	-0.0318	-0.0043	0.1313	17.933	024.58	057
-01.37	-0.0820	-00.535	-0.0669	0.6328	0.6310	0.7616	0.0345	-0.0195	-0.0039	0.1306	19.850	024.55	058
-01.18	-0.0680	-00.478	-0.0550	0.6343	0.6331	0.7649	0.0315	-0.0498	-0.0041	0.1318	21.339	024.42	059
-00.99	-0.0649	-00.409	-0.0540	0.6313	0.6302	0.7614	0.0344	-0.0497	-0.0038	0.1312	19.162	024.51	060
-00.81	-0.0582	-00.358	-0.0494	0.6300	0.6292	0.7604	0.0305	-0.0365	-0.0040	0.1312	18.701	024.51	061
-00.62	-0.0552	-00.317	-0.0484	0.6343	0.6338	0.7630	0.0235	-0.0240	-0.0044	0.1292	17.452	024.45	062
-00.41	-0.0446	-00.266	-0.0401	0.6320	0.6317	0.7611	0.0302	-0.0520	-0.0048	0.1294	18.144	024.42	063
-00.22	-0.0380	-00.216	-0.0355	0.6331	0.6330	0.7634	0.0299	-0.0454	-0.0044	0.1305	17.301	024.32	064
-00.06	-0.0352	-00.158	-0.0345	0.6323	0.6323	0.7634	0.0329	-0.0381	-0.0046	0.1311	13.630	024.29	065
00.15	-0.0207	-00.113	-0.0224	0.6313	0.6314	0.7625	0.0257	-0.0327	-0.0037	0.1311	16.565	024.29	066
00.31	-0.0144	-00.037	-0.0178	0.6314	0.6314	0.7621	0.0259	-0.0481	-0.0045	0.1307	07.782	024.35	067
00.53	-0.0005	00.016	-0.0063	0.6319	0.6319	0.7630	0.0322	-0.0330	-0.0040	0.1311	-97.407	024.35	068
00.72	0.0130	00.084	0.0021	0.6313	0.6312	0.7650	0.0284	-0.0346	-0.0033	0.1338	25.493	024.32	069
00.91	0.0205	00.136	0.0104	0.6326	0.6323	0.7645	0.0212	-0.0294	-0.0050	0.1321	20.200	024.35	070
01.11	0.0312	00.204	0.0190	0.6311	0.6307	0.7638	0.0243	-0.0584	-0.0038	0.1331	19.862	024.42	071
01.27	0.0417	00.255	0.0277	0.6313	0.6305	0.7631	0.0139	-0.0608	-0.0044	0.1326	18.568	024.51	072
01.46	0.0519	00.297	0.0359	0.6298	0.6287	0.7646	0.0235	-0.0527	-0.0042	0.1360	17.384	024.61	073
01.68	0.0658	00.381	0.0473	0.6298	0.6281	0.7653	0.0196	-0.0615	-0.0039	0.1372	17.611	024.64	074
01.87	0.0724	00.439	0.0518	0.6318	0.6297	0.7663	0.0194	-0.0694	-0.0042	0.1365	18.423	024.67	075
02.06	0.0867	00.492	0.0639	0.6358	0.6331	0.7698	0.0089	-0.0651	-0.0044	0.1367	17.239	024.64	076
02.25	0.0943	00.538	0.0692	0.6400	0.6368	0.7734	0.0187	-0.0784	-0.0037	0.1366	17.323	024.51	077
02.41	0.1012	00.599	0.0744	0.6382	0.6345	0.7707	0.0212	-0.0568	-0.0030	0.1361	17.986	024.42	078
02.63	0.1074	00.655	0.0783	0.6363	0.6321	0.7690	0.0173	-0.0509	-0.0035	0.1369	18.540	024.51	079
02.81	0.1221	00.701	0.0908	0.6397	0.6344	0.7711	0.0102	-0.0599	-0.0035	0.1367	17.437	024.48	080
03.00	0.1293	00.745	0.0958	0.6438	0.6379	0.7740	0.0098	-0.0535	-0.0030	0.1361	17.511	024.42	081
03.19	0.1436	00.815	0.1080	0.6429	0.6359	0.7741	0.0126	-0.0609	-0.0031	0.1382	17.248	024.38	082
03.40	0.1508	00.868	0.1126	0.6471	0.6393	0.7753	0.0022	-0.0634	-0.0037	0.1360	17.481	024.35	083
03.59	0.1653	00.904	0.1252	0.6448	0.6357	0.7731	0.0016	-0.0637	-0.0036	0.1374	16.613	024.35	084
03.75	0.1830	00.965	0.1410	0.6458	0.6352	0.7748	-0.0024	-0.0581	-0.0033	0.1397	16.014	024.38	085
03.94	0.1893	01.022	0.1452	0.6465	0.6350	0.7759	0.0005	-0.0440	-0.0031	0.1409	16.408	024.42	086
04.13	0.2037	01.083	0.1573	0.6507	0.6377	0.7767	0.0035	-0.0657	-0.0032	0.1390	16.154	024.42	087
04.31	0.2104	01.133	0.1619	0.6518	0.6378	0.7762	-0.0037	-0.0603	-0.0023	0.1383	16.358	024.45	088
04.56	0.2247	01.185	0.1737	0.6498	0.6340	0.7766	-0.0041	-0.0682	-0.0026	0.1426	16.026	024.45	089
04.72	0.2396	01.239	0.1864	0.6541	0.6365	0.7798	-0.0009	-0.0972	-0.0024	0.1433	15.713	024.42	090
04.89	0.2531	01.298	0.1977	0.6576	0.6383	0.7814	-0.0016	-0.0766	-0.0028	0.1431	15.583	024.45	091
05.11	0.2648	01.356	0.2068	0.6607	0.6397	0.7839	-0.0056	-0.0709	-0.0025	0.1442	15.556	024.35	092
05.28	0.2837	01.413	0.2236	0.6630	0.6396	0.7837	-0.0062	-0.0788	-0.0028	0.1441	15.136	024.29	093
05.48	0.2980	01.458	0.2357	0.6639	0.6384	0.7844	-0.0136	-0.0734	-0.0028	0.1460	14.857	024.29	094
05.65	0.3133	01.507	0.2490	0.6664	0.6387	0.7865	-0.0074	-0.0658	-0.0028	0.1479	14.612	024.22	095
05.89	0.3225	01.552	0.2554	0.6671	0.6374	0.7831	-0.0181	-0.0607	-0.0020	0.1457	14.617	024.32	096
06.09	0.3397	01.594	0.2705	0.6667	0.6343	0.7840	-0.0083	-0.0667	-0.0027	0.1497	14.253	024.38	097
06.28	0.3501	01.637	0.2786	0.6694	0.6349	0.7846	-0.0122	-0.0605	-0.0015	0.1497	14.205	024.38	098
06.48	0.3678	01.682	0.2936	0.6743	0.6369	0.7870	-0.0127	-0.0539	-0.0019	0.1501	13.895	024.38	099
06.70	0.3886	01.735	0.3115	0.6793	0.6383	0.7874	-0.0135	-0.0400	-0.0019	0.1490	13.560	024.42	100
06.87	0.4031	01.788	0.3238	0.6826	0.6390	0.7886	-0.0139	-0.0477	-0.0014	0.1496	13.479	024.42	101
07.06	0.4215	01.836	0.3393	0.6855	0.6386	0.7889	-0.0178	-0.0558	-0.0019	0.1503	13.231	024.38	102
07.26	0.4335	01.871	0.3497	0.6862	0.6365	0.7875	-0.0212	-0.0494	-0.0016	0.1510	13.113	024.48	103
07.48	0.4541	01.922	0.3674	0.6901	0.6365	0.7872	-0.0215	-0.0427	-0.0011	0.1508	12.861	024.51	104
07.65	0.4719	01.985	0.3831	0.6929	0.6358	0.7871	-0.0216	-0.0431	-0.0019	0.1513	12.778	024.51	105
07.84	0.4902	02.033	0.3987	0.6982	0.6372	0.7892	-0.0152	-0.0352	-0.0009	0.1520	12.597	024.48	106

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 HSWT TEST 89

RUN 001 MACH NO 1.247 RN/L 07374596 Q 1485 PSF TO 563

10/17/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
08.04	0.5075	02.075	0.4133	0.7024	0.6376	0.7890	-0.0152	-0.0498	-0.0009	0.1513	12.420	024.51	107
08.26	0.5183	02.146	0.4216	0.7039	0.6361	0.7891	-0.0189	-0.0365	-0.0001	0.1530	12.580	024.48	108
08.46	0.5435	02.218	0.4444	0.7063	0.6332	0.7886	-0.0225	-0.0447	-0.0005	0.1554	12.400	024.48	109
08.63	0.5732	02.277	0.4715	0.7134	0.6346	0.7893	-0.0294	-0.0606	-0.0008	0.1547	12.066	024.45	110
08.86	0.5998	02.346	0.4950	0.7192	0.6344	0.7890	-0.0299	-0.0610	0.0002	0.1546	11.882	024.38	111
09.06	0.6255	02.403	0.5173	0.7287	0.6382	0.7910	-0.0300	-0.0616	-0.0006	0.1528	11.672	024.35	112
09.25	0.6486	02.446	0.5374	0.7352	0.6393	0.7919	-0.0268	-0.0756	-0.0003	0.1526	11.455	024.32	113
09.44	0.6627	02.490	0.5494	0.7358	0.6357	0.7913	-0.0237	-0.0681	0.0005	0.1555	11.417	024.32	114
09.61	0.6792	02.523	0.5641	0.7369	0.6324	0.7896	-0.0275	-0.0472	0.0007	0.1571	11.284	024.35	115
09.75	0.6962	02.565	0.5790	0.7420	0.6332	0.7882	-0.0276	-0.0473	-0.0000	0.1550	11.191	024.38	116
09.92	0.7156	02.620	0.5960	0.7454	0.6316	0.7871	-0.0243	-0.0474	0.0011	0.1555	11.123	024.45	117
10.06	0.7390	02.652	0.6173	0.7507	0.6313	0.7884	-0.0243	-0.0477	0.0003	0.1570	10.900	024.51	118
10.18	0.7531	02.697	0.6294	0.7565	0.6334	0.7901	-0.0278	-0.0350	0.0009	0.1566	10.878	024.51	119
10.32	0.7706	02.750	0.6449	0.7597	0.6319	0.7914	-0.0276	-0.0360	0.0009	0.1595	10.841	024.51	120
10.41	0.7896	02.787	0.6627	0.7624	0.6301	0.7905	-0.0273	-0.0511	0.0009	0.1604	10.722	024.58	121
10.53	0.8001	02.839	0.6712	0.7672	0.6317	0.7916	-0.0337	-0.0605	0.0010	0.1600	10.779	024.58	122
10.59	0.8243	02.868	0.6933	0.7770	0.6364	0.7959	-0.0371	-0.0690	0.0012	0.1595	10.571	024.51	123
10.67	0.8317	02.897	0.7001	0.7760	0.6330	0.7950	-0.0339	-0.0545	0.0014	0.1620	10.582	024.48	124
10.76	0.8414	02.941	0.7080	0.7814	0.6356	0.7953	-0.0304	-0.0830	0.0008	0.1597	10.617	024.42	125
10.86	0.8477	02.949	0.7133	0.7810	0.6326	0.7931	-0.0341	-0.0548	0.0006	0.1605	10.568	024.42	126
11.01	0.8720	02.978	0.7347	0.7901	0.6353	0.7953	-0.0342	-0.0626	0.0019	0.1600	10.377	024.35	127
11.15	0.8802	03.018	0.7416	0.7894	0.6312	0.7943	-0.0308	-0.0696	0.0018	0.1632	10.416	024.32	128
11.24	0.8990	03.054	0.7586	0.7953	0.6322	0.7934	-0.0339	-0.0852	0.0007	0.1612	10.320	024.38	129
11.30	0.9082	03.095	0.7665	0.7986	0.6329	0.7945	-0.0339	-0.0577	0.0024	0.1615	10.353	024.42	130
11.38	0.9124	03.095	0.7702	0.7971	0.6294	0.7918	-0.0305	-0.0568	0.0008	0.1624	10.305	024.48	131
11.39	0.9131	03.103	0.7701	0.8008	0.6330	0.7945	-0.0403	-0.0380	0.0014	0.1615	10.326	024.55	132
11.42	0.9171	03.122	0.7740	0.8003	0.6313	0.7948	-0.0335	-0.0515	0.0019	0.1635	10.343	024.55	133
11.42	0.9310	03.143	0.7871	0.8054	0.6336	0.7962	-0.0337	-0.0517	0.0019	0.1626	10.256	024.48	134
11.42	0.9319	03.146	0.7875	0.8081	0.6361	0.7984	-0.0336	-0.0592	0.0023	0.1623	10.255	024.45	135
00.05	0.0413	-00.025	0.0407	0.6422	0.6422	0.7693	0.0121	-0.0515	-0.0047	0.1271	-01.813	024.42	137
00.05	0.0340	-00.043	0.0334	0.6416	0.6415	0.7668	0.0190	-0.0498	-0.0059	0.1253	-03.821	024.38	137

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 HSWT TEST 89

RUN 002 MACH NO 1.244 RN/L 07456231 Q 1484 PSF TO 558

10/17/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
00.17	0.0243	-00.086	0.0219	0.8362	0.8361	1.0274	0.0279	-0.1014	-0.0031	0.1913	-10.787	024.48	006
-10.57	-2.0571	05.192	-1.8752	1.1651	0.8014	1.0128	0.0430	-0.1354	-0.0041	0.2114	-07.668	024.42	007
-10.41	-2.0179	05.118	-1.8397	1.1535	0.8020	1.0137	0.0493	-0.1615	-0.0046	0.2117	-07.706	024.38	008
-10.23	-1.9719	05.046	-1.7975	1.1434	0.8061	1.0149	0.0515	-0.1593	-0.0036	0.2088	-07.774	024.38	009
-10.02	-1.9239	04.951	-1.7546	1.1267	0.8043	1.0138	0.0466	-0.1076	-0.0043	0.2095	-07.818	024.42	010
-09.87	-1.8900	04.868	-1.7240	1.1174	0.8054	1.0132	0.0523	-0.0902	-0.0030	0.2077	-07.825	024.45	011
-09.66	-1.8460	04.782	-1.6847	1.1034	0.8051	1.0131	0.0377	-0.0765	-0.0030	0.2080	-07.870	024.48	012
-09.51	-1.8079	04.708	-1.6499	1.0938	0.8063	1.0144	0.0368	-0.0605	-0.0039	0.2080	-07.912	024.48	013
-09.30	-1.7673	04.658	-1.6129	1.0866	0.8118	1.0181	0.0293	-0.0677	-0.0048	0.2062	-08.007	024.42	014
-09.11	-1.7213	04.577	-1.5713	1.0724	0.8100	1.0162	0.0280	-0.0516	-0.0031	0.2062	-08.079	024.42	015
-08.93	-1.6748	04.496	-1.5282	1.0640	0.8138	1.0186	0.0408	-0.0905	-0.0015	0.2048	-08.156	024.42	016
-08.75	-1.6415	04.423	-1.4986	1.0536	0.8133	1.0173	0.0371	-0.1251	-0.0029	0.2041	-08.186	024.45	017
-08.57	-1.5948	04.329	-1.4560	1.0398	0.8111	1.0155	0.0326	-0.1164	-0.0027	0.2044	-08.247	024.51	018
-08.37	-1.5612	04.265	-1.4261	1.0327	0.8141	1.0167	0.0318	-0.0936	-0.0049	0.2026	-08.299	024.51	019
-08.19	-1.5245	04.188	-1.3924	1.0272	0.8184	1.0188	0.0275	-0.0925	-0.0034	0.2005	-08.346	024.48	020
-08.04	-1.4882	04.104	-1.3593	1.0174	0.8174	1.0182	0.0304	-0.1115	-0.0045	0.2008	-08.378	024.45	021
-07.86	-1.4581	04.042	-1.3322	1.0123	0.8207	1.0207	0.0260	-0.0964	-0.0031	0.2000	-08.422	024.38	022
-07.65	-1.4136	03.946	-1.2922	0.9985	0.8175	1.0172	0.0316	-0.0716	-0.0031	0.1997	-08.481	024.42	023
-07.48	-1.3688	03.841	-1.2504	0.9910	0.8198	1.0167	0.0375	-0.0681	-0.0062	0.1969	-08.525	024.45	024
-07.31	-1.3356	03.756	-1.2202	0.9850	0.8217	1.0189	0.0299	-0.0674	-0.0040	0.1972	-08.543	024.42	025
-07.14	-1.3004	03.676	-1.1877	0.9808	0.8256	1.0210	0.0325	-0.0794	-0.0030	0.1954	-08.588	024.35	026
-06.97	-1.2637	03.587	-1.1545	0.9738	0.8236	1.0172	0.0317	-0.0630	-0.0047	0.1936	-08.623	024.38	027
-06.79	-1.2273	03.511	-1.1210	0.9644	0.8250	1.0200	0.0274	-0.0619	-0.0033	0.1950	-08.692	024.35	028
-06.60	-1.1839	03.397	-1.0809	0.9579	0.8273	1.0223	0.0198	-0.0821	-0.0024	0.1950	-08.716	024.35	029
-06.45	-1.1544	03.314	-1.0542	0.9508	0.8262	1.0194	0.0294	-0.1000	-0.0014	0.1932	-08.722	024.38	030
-06.28	-1.1083	03.209	-1.0110	0.9443	0.8280	1.0212	0.0248	-0.0696	-0.0025	0.1932	-08.797	024.38	031
-06.11	-1.0684	03.120	-0.9745	0.9343	0.8252	1.0171	0.0274	-0.0885	-0.0018	0.1919	-08.872	024.48	032
-05.89	-1.0241	03.021	-0.9340	0.9260	0.8253	1.0151	0.0329	-0.0850	-0.0006	0.1898	-08.962	024.61	033
-05.77	-0.9898	02.924	-0.9016	0.9233	0.8280	1.0184	0.0188	-0.0781	-0.0010	0.1904	-08.975	024.61	034
-05.56	-0.9537	02.822	-0.8691	0.9157	0.8272	1.0194	0.0283	-0.1096	-0.0008	0.1922	-08.991	024.64	035
-05.37	-0.9295	02.751	-0.8477	0.9135	0.8302	1.0202	0.0275	-0.0866	-0.0013	0.1900	-08.991	024.67	036
-05.19	-0.8993	02.643	-0.8205	0.9083	0.8303	1.0193	0.0200	-0.0783	0.0004	0.1890	-08.929	024.74	037
-05.01	-0.8699	02.536	-0.7936	0.9076	0.8349	1.0237	0.0264	-0.0895	-0.0001	0.1888	-08.858	024.61	038
-04.85	-0.8417	02.459	-0.7678	0.9064	0.8382	1.0241	0.0229	-0.0822	-0.0018	0.1859	-08.877	024.55	039
-04.64	-0.8110	02.371	-0.7404	0.9038	0.8410	1.0268	0.0259	-0.0592	-0.0013	0.1858	-08.881	024.45	040
-04.46	-0.7801	02.274	-0.7123	0.9004	0.8424	1.0282	0.0327	-0.0787	-0.0007	0.1858	-08.857	024.32	041
-04.27	-0.7477	02.174	-0.6828	0.8963	0.8429	1.0280	0.0399	-0.1198	-0.0013	0.1851	-08.832	024.22	042
-04.09	-0.7062	02.061	-0.6441	0.8942	0.8460	1.0278	0.0184	-0.0570	-0.0006	0.1819	-08.865	024.19	043
-03.88	-0.6625	01.942	-0.6040	0.8854	0.8426	1.0227	0.0215	-0.0622	-0.0002	0.1801	-08.936	024.22	044
-03.72	-0.6268	01.839	-0.5708	0.8808	0.8419	1.0242	0.0316	-0.0736	-0.0006	0.1823	-08.914	024.26	045
-03.52	-0.5975	01.756	-0.5448	0.8760	0.8410	1.0227	0.0212	-0.0813	-0.0010	0.1817	-08.929	024.32	046
-03.34	-0.5668	01.656	-0.5169	0.8723	0.8407	1.0224	0.0276	-0.0573	-0.0012	0.1817	-08.873	024.32	047
-03.16	-0.5345	01.552	-0.4872	0.8719	0.8437	1.0261	0.0414	-0.1115	0.0021	0.1824	-08.822	024.35	048
-02.99	-0.5075	01.459	-0.4628	0.8698	0.8445	1.0270	0.0275	-0.0908	-0.0002	0.1824	-08.736	024.35	049
-02.81	-0.4810	01.349	-0.4392	0.8631	0.8405	1.0214	0.0205	-0.0830	-0.0004	0.1809	-08.519	024.48	050
-02.61	-0.4488	01.246	-0.4102	0.8578	0.8382	1.0211	0.0207	-0.1245	0.0012	0.1829	-08.433	024.55	051
-02.46	-0.4230	01.155	-0.3865	0.8596	0.8422	1.0240	0.0309	-0.1148	-0.0014	0.1818	-08.295	024.51	052
-02.28	-0.3891	01.072	-0.3555	0.8537	0.8389	1.0235	0.0271	-0.0936	0.0003	0.1846	-08.373	024.51	053
-02.10	-0.3522	00.976	-0.3211	0.8571	0.8448	1.0283	0.0135	-0.0597	-0.0022	0.1835	-08.416	024.48	054
-01.95	-0.3228	00.871	-0.2939	0.8570	0.8466	1.0309	0.0137	-0.0736	-0.0007	0.1844	-08.199	024.38	055
-01.77	-0.2888	00.780	-0.2626	0.8550	0.8465	1.0296	0.0204	-0.0647	-0.0002	0.1830	-08.205	024.35	056

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 — HSWT TEST 89

RUN 002 MACH NO 1.244 RN/L 07456231 Q 1484 PSF TO 558 — 10/17/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
-01.59	-0.2661	00.711	-0.2424	0.8548	0.8478	1.0298	0.0204	-0.0500	-0.0012	0.1820	-08.111	024.35	057
-01.42	-0.2353	00.634	-0.2143	0.8526	0.8470	1.0286	0.0175	-0.0934	-0.0017	0.1816	-08.189	024.35	058
-01.24	-0.2122	00.556	-0.1937	0.8517	0.8473	1.0289	0.0313	-0.1121	-0.0036	0.1816	-07.966	024.35	059
-01.04	-0.1849	00.462	-0.1695	0.8505	0.8473	1.0290	0.0213	-0.1060	-0.0011	0.1817	-07.590	024.38	060
-00.84	-0.1617	00.383	-0.1492	0.8457	0.8434	1.0266	0.0283	-0.1114	-0.0013	0.1832	-07.205	024.45	061
-00.69	-0.1277	00.284	-0.1175	0.8474	0.8459	1.0301	0.0315	-0.0886	-0.0018	0.1842	-06.757	024.45	062
-00.52	-0.1049	00.231	-0.0972	0.8503	0.8494	1.0318	0.0314	-0.0884	-0.0012	0.1825	-06.690	024.48	063
-00.34	-0.0746	00.147	-0.0695	0.8483	0.8478	1.0313	0.0349	-0.0945	-0.0016	0.1835	-05.991	024.48	064
-00.17	-0.0479	00.071	-0.0454	0.8497	0.8496	1.0316	0.0283	-0.1025	-0.0018	0.1821	-04.475	024.48	065
00.01	-0.0176	00.011	-0.0178	0.8502	0.8502	1.0319	0.0282	-0.1164	-0.0012	0.1818	-01.922	024.51	066
00.19	0.0057	-00.058	0.0029	0.8476	0.8476	1.0291	0.0349	-0.1217	-0.0013	0.1815	-30.978	024.55	067
00.39	0.0332	-00.134	0.0274	0.8473	0.8471	1.0299	0.0313	-0.1217	-0.0016	0.1828	-12.279	024.51	068
00.54	0.0641	-00.217	0.0561	0.8454	0.8449	1.0278	0.0242	-0.1215	-0.0021	0.1829	-10.261	024.61	069
00.73	0.0950	-00.284	0.0843	0.8490	0.8478	1.0306	0.0307	-0.1198	-0.0026	0.1828	-09.081	024.58	070
00.90	0.1112	-00.347	0.0978	0.8524	0.8507	1.0324	0.0338	-0.1117	-0.0020	0.1816	-09.470	024.55	071
01.11	0.1431	-00.432	0.1266	0.8542	0.8516	1.0345	0.0336	-0.1113	-0.0021	0.1829	-09.173	024.45	072
01.26	0.1749	-00.509	0.1560	0.8555	0.8519	1.0348	0.0266	-0.1120	-0.0017	0.1829	-08.843	024.38	073
01.47	0.2107	-00.618	0.1889	0.8566	0.8495	1.0324	0.0295	-0.0890	-0.0021	0.1829	-08.916	024.32	074
01.62	0.2382	-00.695	0.2142	0.8544	0.8480	1.0313	0.0257	-0.0815	-0.0019	0.1833	-08.862	024.32	075
01.83	0.2625	-00.750	0.2353	0.8578	0.8498	1.0313	0.0289	-0.0806	-0.0017	0.1815	-08.679	024.26	076
01.98	0.2865	-00.827	0.2571	0.8558	0.8464	1.0286	0.0357	-0.1146	-0.0009	0.1822	-08.770	024.29	077
02.16	0.3173	-00.918	0.2851	0.8605	0.8491	1.0290	0.0421	-0.1050	-0.0019	0.1799	-08.787	024.32	078
02.33	0.3451	-01.011	0.3104	0.8614	0.8481	1.0265	0.0385	-0.1046	-0.0030	0.1784	-08.899	024.32	079
02.53	0.3770	-01.111	0.3393	0.8600	0.8442	1.0243	0.0349	-0.1256	-0.0020	0.1802	-08.952	024.35	080
02.70	0.3975	-01.175	0.3573	0.8618	0.8440	1.0245	0.0349	-0.1323	-0.0025	0.1805	-08.976	024.32	081
02.88	0.4395	-01.286	0.3965	0.8648	0.8438	1.0247	0.0308	-0.1242	-0.0024	0.1809	-08.887	024.38	082
03.05	0.4683	-01.370	0.4229	0.8635	0.8397	1.0215	0.0336	-0.1148	-0.0018	0.1818	-08.888	024.51	083
03.23	0.5063	-01.473	0.4581	0.8685	0.8413	1.0231	0.0298	-0.1282	-0.0013	0.1818	-08.838	024.58	084
03.41	0.5375	-01.549	0.4865	0.8719	0.8414	1.0242	0.0363	-0.1334	-0.0014	0.1828	-08.753	024.58	085
03.58	0.5693	-01.634	0.5155	0.8768	0.8428	1.0249	0.0292	-0.1196	-0.0019	0.1821	-08.720	024.55	086
03.76	0.5975	-01.721	0.5411	0.8793	0.8420	1.0243	0.0287	-0.0975	-0.0015	0.1824	-08.748	024.51	087
03.93	0.6310	-01.826	0.5717	0.8858	0.8445	1.0264	0.0286	-0.1111	-0.0016	0.1819	-08.791	024.45	088
04.11	0.6615	-01.915	0.5995	0.8876	0.8424	1.0240	0.0284	-0.1171	-0.0021	0.1816	-08.795	024.48	089
04.31	0.6978	-02.018	0.6324	0.8948	0.8448	1.0267	0.0280	-0.1091	-0.0026	0.1819	-08.783	024.45	090
04.49	0.7216	-02.094	0.6535	0.8966	0.8427	1.0250	0.0278	-0.1225	-0.0018	0.1823	-08.816	024.45	091
04.65	0.7612	-02.210	0.6905	0.9008	0.8419	1.0253	0.0342	-0.1274	-0.0011	0.1834	-08.820	024.45	092
04.83	0.7950	-02.301	0.7212	0.9078	0.8439	1.0279	0.0306	-0.1203	-0.0018	0.1839	-08.794	024.38	093
05.01	0.8300	-02.392	0.7532	0.9119	0.8426	1.0255	0.0266	-0.1056	-0.0012	0.1829	-08.755	024.38	094
05.19	0.8667	-02.503	0.7872	0.9146	0.8397	1.0247	0.0333	-0.1178	-0.0018	0.1851	-08.774	024.35	095
05.37	0.9011	-02.608	0.8181	0.9241	0.8434	1.0263	0.0260	-0.1033	-0.0023	0.1829	-08.792	024.38	096
05.55	0.9340	-02.696	0.8482	0.9279	0.8414	1.0261	0.0285	-0.1011	-0.0014	0.1847	-08.770	024.35	097
05.76	0.9638	-02.775	0.8744	0.9345	0.8420	1.0267	0.0311	-0.1058	-0.0009	0.1848	-08.748	024.38	098
05.92	1.0048	-02.888	0.9125	0.9422	0.8431	1.0292	0.0268	-0.0972	-0.0017	0.1861	-08.731	024.35	099
06.10	1.0334	-02.987	0.9382	0.9457	0.8406	1.0276	0.0223	-0.0809	-0.0013	0.1869	-08.781	024.42	100
06.31	1.0737	-03.085	0.9749	0.9529	0.8400	1.0284	0.0246	-0.0851	-0.0008	0.1884	-08.730	024.48	101
06.49	1.1147	-03.178	1.0125	0.9610	0.8403	1.0270	0.0169	-0.0842	-0.0006	0.1866	-08.661	024.51	102
06.67	1.1459	-03.254	1.0405	0.9675	0.8400	1.0280	0.0230	-0.0957	-0.0003	0.1881	-08.626	024.51.	103
06.86	1.1904	-03.356	1.0814	0.9778	0.8417	1.0300	0.0221	-0.0939	-0.0005	0.1884	-08.566	024.48	104
07.04	1.2351	-03.468	1.1226	0.9870	0.8419	1.0306	0.0210	-0.0848	0.0006	0.1887	-08.530	024.45	105
07.22	1.2706	-03.575	1.1545	0.9965	0.8435	1.0308	0.0234	-0.0820	0.0006	0.1872	-08.549	024.45	106
07.40	1.3100	-03.679	1.1903	1.0064	0.8447	1.0340	0.0193	-0.0809	0.0002	0.1893	-08.531	024.38	107

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 — MSWT TEST 89

RUN 002 MACH NO 1.244 RN/L 07456231 Q 1484 PSF TO 558 — 10/17/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
07.56	1.3456	-03.752	1.2231	1.0118	0.8421	1.0305	0.0217	-0.0641	-0.0006	0.1884	-08.472	024.42	108
07.77	1.3748	-03.807	1.2484	1.0192	0.8410	1.0301	0.0277	-0.0616	-0.0003	0.1891	-08.412	024.45	109
07.96	1.4137	-03.905	1.2839	1.0273	0.8397	1.0288	0.0233	-0.0460	0.0010	0.1891	-08.392	024.45	110
08.13	1.4440	-04.009	1.3098	1.0414	0.8456	1.0345	0.0156	-0.0240	0.0009	0.1890	-08.434	024.35	111
08.32	1.4836	-04.112	1.3465	1.0456	0.8398	1.0327	0.0182	-0.0215	0.0009	0.1929	-08.421	024.29	112
08.50	1.5287	-04.204	1.3876	1.0573	0.8406	1.0324	0.0069	0.0071	0.0010	0.1918	-08.355	024.19	113
08.69	1.5610	-04.243	1.4159	1.0686	0.8425	1.0325	0.0133	0.0019	0.0009	0.1900	-08.258	024.16	114
08.87	1.6075	-04.340	1.4584	1.0802	0.8424	1.0328	0.0088	0.0107	0.0001	0.1904	-08.202	024.16	115
09.03	1.6481	-04.432	1.4961	1.0866	0.8384	1.0300	0.0112	0.0060	0.0005	0.1916	-08.170	024.19	116
09.16	1.6816	-04.510	1.5269	1.0946	0.8376	1.0299	0.0075	-0.0220	0.0001	0.1923	-08.148	024.22	117
09.31	1.7185	-04.587	1.5603	1.1043	0.8372	1.0288	0.0135	-0.0263	-0.0000	0.1916	-08.109	024.26	118
09.45	1.7499	-04.643	1.5886	1.1139	0.8380	1.0306	0.0160	-0.0101	0.0001	0.1926	-08.056	024.26	119
09.58	1.7910	-04.701	1.6265	1.1246	0.8382	1.0311	0.0122	-0.0383	-0.0003	0.1929	-07.975	024.29	120
09.69	1.8076	-04.739	1.6412	1.1283	0.8361	1.0302	0.0188	-0.0506	-0.0017	0.1940	-07.965	024.32	121
09.79	1.8482	-04.837	1.6785	1.1419	0.8398	1.0335	0.0110	-0.0358	0.0003	0.1936	-07.950	024.26	122
09.87	1.8628	-04.851	1.6919	1.1433	0.8363	1.0300	0.0104	-0.0205	0.0003	0.1937	-07.912	024.35	123
09.95	1.8893	-04.899	1.7163	1.1503	0.8364	1.0301	0.0169	-0.0610	-0.0003	0.1937	-07.877	024.42	124
10.03	1.9075	-04.917	1.7328	1.1547	0.8352	1.0308	0.0129	-0.0326	0.0003	0.1956	-07.832	024.42	125
10.08	1.9112	-04.919	1.7363	1.1521	0.8302	1.0269	0.0161	-0.0456	-0.0004	0.1967	-07.819	024.51	126
10.22	1.9358	-04.981	1.7574	1.1629	0.8328	1.0302	0.0154	-0.0299	-0.0014	0.1974	-07.817	024.55	127
10.35	1.9600	-05.026	1.7776	1.1760	0.8375	1.0344	0.0043	0.0262	-0.0003	0.1969	-07.790	024.45	128
10.49	1.9938	-05.092	1.8081	1.1862	0.8373	1.0349	0.0040	-0.0016	0.0004	0.1976	-07.758	024.42	129
10.57	2.0157	-05.138	1.8269	1.1987	0.8433	1.0372	0.0071	-0.0005	0.0014	0.1939	-07.743	024.35	130
10.62	2.0263	-05.158	1.8368	1.1993	0.8402	1.0331	0.0064	0.0293	-0.0003	0.1929	-07.734	024.35	131
10.67	2.0301	-05.163	1.8400	1.1985	0.8370	1.0314	0.0061	0.0367	0.0001	0.1944	-07.727	024.38	132
10.68	2.0398	-05.172	1.8505	1.1949	0.8314	1.0287	0.0087	0.0666	0.0004	0.1973	-07.703	024.45	133
10.70	2.0594	-05.211	1.8675	1.2079	0.8400	1.0343	-0.0014	0.0509	0.0005	0.1943	-07.687	024.42	134
10.70	2.0639	-05.212	1.8726	1.2051	0.8363	1.0330	0.0022	0.0370	0.0007	0.1968	-07.672	024.42	135
10.73	2.0663	-05.216	1.8740	1.2083	0.8382	1.0358	0.0053	0.0451	0.0005	0.1976	-07.669	024.42	136
-00.04	-0.0062	-00.035	-0.0056	0.8513	0.8513	1.0276	0.0210	-0.0677	-0.0012	0.1763	17.263	024.32	137
-00.02	-0.0024	-00.051	-0.0022	0.8471	0.8471	1.0247	0.0347	-0.0791	-0.0030	0.1776	64.373	024.45	138

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 HSWT TEST 89

RUN 003 MACH NO 1.243 RN/L 07052099 Q 1477 PSF TO 580

10/17/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
00.19	0.0339	-00.127	0.0311	0.8435	0.8434	1.0379	0.0314	-0.1226	0.1818	0.1945	-11.423	024.32	005
00.19	0.0342	-00.144	0.0314	0.8428	0.8426	1.0376	0.0246	-0.1236	0.1813	0.1949	-12.785	024.32	006
-10.84	-2.0920	05.280	-1.9015	1.1933	0.8143	1.0268	-0.0014	0.1793	0.1954	0.2125	-07.668	024.45	007
-10.53	-2.0174	05.170	-1.8331	1.1777	0.8230	1.0357	0.0010	0.1741	0.1969	0.2126	-07.785	024.45	008
-10.16	-1.9531	05.092	-1.7773	1.1545	0.8229	1.0345	0.0068	0.1418	0.1966	0.2116	-07.920	024.35	009
-09.80	-1.8457	04.844	-1.6777	1.1307	0.8287	1.0396	-0.0019	0.1308	0.1966	0.2109	-07.973	024.38	010
-09.44	-1.7804	04.701	-1.6207	1.1073	0.8265	1.0356	0.0004	0.1196	0.1989	0.2091	-08.022	024.42	011
-09.08	-1.6813	04.510	-1.5292	1.0855	0.8306	1.0393	-0.0053	0.1446	0.1982	0.2087	-08.149	024.42	012
-08.72	-1.6147	04.412	-1.4697	1.0691	0.8340	1.0417	0.0035	0.1278	0.2017	0.2076	-08.300	024.32	013
-08.33	-1.5152	04.199	-1.3776	1.0500	0.8394	1.0452	-0.0058	0.1606	0.1992	0.2058	-08.419	024.26	014
-07.97	-1.4643	04.125	-1.3347	1.0284	0.8334	1.0382	0.0005	0.1269	0.1998	0.2048	-08.559	024.26	015
-07.62	-1.3545	03.851	-1.2316	1.0087	0.8365	1.0384	-0.0150	0.1154	0.2004	0.2019	-08.637	024.26	016
-07.28	-1.3015	03.702	-1.1847	0.9970	0.8389	1.0412	-0.0061	0.1208	0.2013	0.2022	-08.642	024.22	017
-06.93	-1.2111	03.484	-1.1003	0.9848	0.8447	1.0437	-0.0044	0.1046	0.2006	0.1990	-08.738	024.16	018
-06.57	-1.1377	03.321	-1.0333	0.9723	0.8478	1.0461	0.0015	0.0656	0.2020	0.1982	-08.867	024.13	019
-06.22	-1.0636	03.142	-0.9654	0.9587	0.8484	1.0446	-0.0002	0.0835	0.2021	0.1962	-08.975	024.19	020
-05.86	-0.9781	02.939	-0.8868	0.9399	0.8445	1.0389	0.0122	0.0458	0.2031	0.1944	-09.129	024.35	021
-05.50	-0.9132	02.748	-0.8275	0.9354	0.8518	1.0443	0.0007	0.0548	0.2024	0.1925	-09.143	024.42	022
-05.13	-0.8547	02.577	-0.7747	0.9297	0.8567	1.0473	0.0034	0.0302	0.2025	0.1905	-09.158	024.32	023
-04.82	-0.7881	02.358	-0.7131	0.9227	0.8596	1.0491	0.0068	0.0115	0.2034	0.1895	-09.090	024.32	024
-04.39	-0.7177	02.154	-0.6503	0.9060	0.8535	1.0399	0.0132	0.0077	0.2009	0.1863	-09.119	024.35	025
-04.02	-0.6523	01.971	-0.5904	0.9029	0.8592	1.0451	0.0097	-0.0055	0.2003	0.1859	-09.180	024.35	026
-03.66	-0.5957	01.823	-0.5398	0.8927	0.8564	1.0423	0.0235	-0.0521	0.2008	0.1859	-09.295	024.29	027
-03.31	-0.5215	01.556	-0.4710	0.8880	0.8593	1.0441	0.0132	-0.0581	0.1973	0.1848	-09.063	024.32	028
-02.98	-0.4779	01.382	-0.4326	0.8823	0.8586	1.0448	0.0203	-0.0838	0.1982	0.1862	-08.787	024.32	029
-02.57	-0.4195	01.226	-0.3807	0.8745	0.8566	1.0432	0.0197	-0.0676	0.1947	0.1866	-08.880	024.38	030
-02.24	-0.3548	01.060	-0.3210	0.8723	0.8591	1.0461	0.0263	-0.0935	0.1942	0.1869	-09.077	024.35	031
-01.90	-0.3017	00.923	-0.2731	0.8675	0.8580	1.0429	0.0124	-0.0872	0.1890	0.1849	-09.297	024.35	032
-01.55	-0.2431	00.735	-0.2197	0.8674	0.8612	1.0464	0.0157	-0.1057	0.1861	0.1852	-09.185	024.45	033
-01.18	-0.1869	00.553	-0.1692	0.8663	0.8626	1.0469	0.0155	-0.0971	0.1846	0.1844	-08.994	024.32	034
-00.83	-0.1104	00.306	-0.0979	0.8654	0.8639	1.0465	0.0291	-0.1141	0.1816	0.1826	-08.431	024.22	035
-00.48	-0.0680	00.183	-0.0608	0.8603	0.8597	1.0428	0.0358	-0.1260	0.1800	0.1830	-08.162	024.22	036
-00.13	-0.0174	00.044	-0.0154	0.8619	0.8618	1.0473	0.0184	-0.1268	0.1795	0.1855	-07.634	024.35	037
00.57	0.1039	-00.342	0.0954	0.8615	0.8605	1.0446	0.0240	-0.1141	0.1787	0.1841	-10.011	024.42	039
00.93	0.1518	-00.484	0.1378	0.8636	0.8613	1.0455	0.0203	-0.0995	0.1803	0.1842	-09.681	024.29	040
01.31	0.2112	-00.655	0.1914	0.8677	0.8631	1.0462	0.0302	-0.0961	0.1812	0.1832	-09.424	024.22	041
01.64	0.2949	-00.889	0.2700	0.8717	0.8636	1.0442	0.0196	-0.1173	0.1829	0.1806	-09.154	024.19	042
02.00	0.3453	-01.024	0.3149	0.8743	0.8627	1.0446	0.0227	-0.1220	0.1845	0.1819	-09.012	024.26	043
02.38	0.3757	-01.113	0.3398	0.8722	0.8573	1.0410	0.0188	-0.0924	0.1870	0.1836	-09.003	024.35	044
02.73	0.4514	-01.331	0.4099	0.8804	0.8599	1.0414	0.0184	-0.1046	0.1897	0.1815	-08.959	024.32	045
03.08	0.5157	-01.504	0.4685	0.8898	0.8633	1.0447	0.0287	-0.1445	0.1923	0.1813	-08.857	024.29	046
03.43	0.5755	-01.675	0.5229	0.8931	0.8602	1.0402	0.0319	-0.1639	0.1938	0.1800	-08.842	024.26	047
03.13	0.7104	-02.067	0.6464	0.9119	0.8629	1.0448	0.0310	-0.1874	0.1968	0.1819	-08.837	024.38	049
04.46	0.7726	-02.265	0.7034	0.9165	0.8590	1.0427	0.0306	-0.1923	0.1960	0.1836	-08.908	024.42	050
04.85	0.8297	-02.425	0.7542	0.9234	0.8563	1.0399	0.0339	-0.2049	0.1975	0.1836	-08.880	024.35	051
05.22	0.9111	-02.653	0.8294	0.9365	0.8572	1.0416	0.0434	-0.2287	0.1985	0.1844	-08.845	024.38	052
05.55	0.9751	-02.841	0.8873	0.9509	0.8606	1.0457	0.0455	-0.2389	0.1986	0.1851	-08.852	024.35	053
05.95	1.0279	-02.975	0.9334	0.9610	0.8591	1.0492	0.0439	-0.2215	0.1990	0.1901	-08.794	024.38	054
06.31	1.1101	-03.208	1.0090	0.9756	0.8588	1.0499	0.0385	-0.2390	0.1989	0.1911	-08.779	024.38	055
06.68	1.1651	-03.346	1.0574	0.9882	0.8586	1.0496	0.0406	-0.2370	0.1990	0.1910	-08.724	024.29	056
07.04	1.2501	-03.554	1.1349	1.0094	0.8627	1.0523	0.0423	-0.2618	0.2003	0.1896	-08.638	024.22	057

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 MSWT TEST 89

RUN 003 MACH NO 1.243 RN/L 07052099 Q 1477 PSF TO 580

10/17/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
07.41	1.3160	-03.724	1.1941	1.0231	0.8606	1.0516	0.0369	-0.2518	0.1993	0.1910	-08.597	024.22	058
07.80	1.3898	-03.894	1.2600	1.0418	0.8611	1.0518	0.0382	-0.2262	0.1998	0.1906	-08.512	024.22	059
08.17	1.4901	-04.093	1.3532	1.0596	0.8565	1.0522	0.0397	-0.2855	0.1994	0.1958	-08.345	024.29	060
08.52	1.5697	-04.250	1.4262	1.0748	0.8517	1.0468	0.0442	-0.2862	0.1988	0.1951	-08.225	024.42	061
08.87	1.6264	-04.444	1.4748	1.0977	0.8571	1.0511	0.0422	-0.2541	0.1980	0.1940	-08.300	024.38	062
09.19	1.7012	-04.622	1.5427	1.1165	0.8559	1.0505	0.0336	-0.2248	0.1975	0.1947	-08.254	024.26	063
09.45	1.7721	-04.782	1.6075	1.1354	0.8561	1.0519	0.0355	-0.2565	0.1959	0.1958	-08.199	024.29	064
09.71	1.8167	-04.853	1.6464	1.1493	0.8551	1.0493	0.0413	-0.2609	0.1956	0.1942	-08.116	024.32	065
09.90	1.8500	-04.920	1.6756	1.1598	0.8546	1.0481	0.0339	-0.2756	0.1962	0.1935	-08.079	024.29	066
10.03	1.9028	-05.000	1.7244	1.1751	0.8567	1.0509	0.0370	-0.3317	0.1966	0.1942	-07.983	024.26	067
10.22	1.9354	-05.081	1.7527	1.1872	0.8575	1.0500	0.0325	-0.3094	0.1969	0.1925	-07.976	024.22	068
10.49	1.9936	-05.188	1.8045	1.2043	0.8558	1.0493	0.0312	-0.3074	0.1959	0.1935	-07.906	024.22	069
10.62	2.0250	-05.230	1.8337	1.2080	0.8492	1.0458	0.0296	-0.2813	0.1944	0.1966	-07.846	024.42	070
10.68	2.0194	-05.216	1.8276	1.2061	0.8467	1.0432	0.0326	-0.2514	0.1941	0.1966	-07.868	024.48	071
10.73	2.0542	-05.270	1.8595	1.2204	0.8528	1.0492	0.0360	-0.3077	0.1956	0.1965	-07.794	024.45	072
00.09	0.0227	-00.131	0.0213	0.8627	0.8626	1.0421	0.0354	-0.1518	0.1798	0.1795	-17.518	024.22	073
00.09	0.0105	-00.099	0.0092	0.8619	0.8619	1.0411	0.0248	-0.1169	0.1784	0.1792	-28.599	024.38	074

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 — MSMT TEST 89

RUN 004 MACH NO 1.018 RN/L 07407903 Q 1422 PSF TO 583 — 10/17/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PD	PNT
00.18	0.0413	-00.011	0.0385	0.8946	0.8944	1.0616	0.0250	-0.0933	0.1929	0.1672	-00.809	026.38	006
-08.90	-1.7228	05.454	-1.5637	1.1500	0.8942	1.0814	0.1064	-0.0698	0.2189	0.1871	-09.617	026.22	000
-11.12	-2.1921	06.582	-1.9789	1.2980	0.8921	1.0931	-0.0182	0.2488	0.2216	0.2011	-09.121	026.25	008
-11.11	-2.2099	06.653	-1.9958	1.3050	0.8959	1.0987	-0.0254	0.2813	0.2217	0.2028	-09.146	026.41	009
-10.74	-2.1106	06.346	-1.9064	1.2750	0.8975	1.0973	-0.0144	0.2244	0.2212	0.1997	-09.135	026.54	010
-09.55	-1.8360	05.781	-1.6605	1.1967	0.9046	1.0996	-0.0098	0.1967	0.2224	0.1950	-09.566	026.38	011
-08.12	-1.4979	05.000	-1.3538	1.1162	0.9136	1.1037	-0.0066	0.1210	0.2228	0.1900	-10.140	026.29	012
-06.62	-1.1561	04.080	-1.0431	1.0397	0.9124	1.0949	-0.0089	0.0506	0.2197	0.1824	-10.721	026.25	013
-05.05	-0.8065	03.080	-0.7230	0.9837	0.9132	1.0888	-0.0122	0.0347	0.2184	0.1756	-11.601	026.19	014
-03.31	-0.4912	02.088	-0.4377	0.9396	0.9127	1.0767	0.0100	-0.0360	0.2135	0.1640	-12.912	026.25	015
-01.59	-0.1779	01.061	-0.1524	0.9174	0.9129	1.0762	0.0231	-0.0593	0.2010	0.1634	-18.131	026.32	016
-00.46	0.0223	00.341	0.0296	0.9141	0.9143	1.0766	0.0226	-0.0513	0.1923	0.1623	46.519	026.35	017
-00.05	0.0632	00.079	0.0640	0.9102	0.9102	1.0746	0.0203	-0.1082	0.1904	0.1644	03.786	026.29	018
00.14	0.0669	-00.041	0.0627	0.9097	0.9095	1.0728	0.0389	-0.1557	0.1934	0.1632	-01.896	026.25	019
00.18	0.0694	-00.123	0.0666	0.9078	0.9076	1.0682	0.0285	-0.1481	0.1878	0.1606	-05.397	026.41	020
00.23	0.0656	-00.125	0.0620	0.9095	0.9092	1.0674	0.0633	-0.1640	0.1885	0.1582	-05.769	026.48	021
00.20	0.0701	-00.124	0.0668	0.9117	0.9114	1.0777	0.0217	-0.1433	0.1895	0.1663	-05.393	026.38	022
00.21	0.0622	-00.076	0.0588	0.9128	0.9126	1.0787	0.0254	-0.1522	0.1914	0.1661	-03.737	026.22	023
00.23	0.0586	-00.077	0.0549	0.9073	0.9070	1.0758	0.0184	-0.1461	0.1924	0.1688	-03.988	026.22	024
00.23	0.0590	-00.111	0.0554	0.9108	0.9106	1.0806	0.0256	-0.1371	0.1926	0.1700	-05.730	026.25	025
00.20	0.0706	-00.142	0.0674	0.9031	0.9028	1.0731	0.0463	-0.1394	0.1918	0.1703	-06.120	026.41	026
00.20	0.0544	-00.094	0.0512	0.9021	0.9019	1.0764	0.0358	-0.1196	0.1927	0.1745	-05.267	026.45	027
00.21	0.0629	-00.094	0.0597	0.9084	0.9082	1.0816	0.0360	-0.1426	0.1950	0.1734	-04.518	026.38	028
00.21	0.0708	-00.109	0.0675	0.9010	0.9007	1.0722	0.0433	-0.1496	0.1926	0.1714	-04.691	026.29	029
00.20	0.0639	-00.112	0.0606	0.9041	0.9038	1.0748	0.0441	-0.1954	0.1942	0.1710	-05.325	026.22	030
00.13	0.0258	00.002	0.0238	0.8982	0.8982	1.0701	0.0397	-0.1355	0.1922	0.1719	00.278	026.38	031
-00.59	-0.1019	00.390	-0.0925	0.9093	0.9083	1.0828	0.0405	-0.1405	0.1953	0.1745	-11.630	026.29	032
-01.64	-0.2806	00.970	-0.2547	0.9089	0.9013	1.0754	0.0301	-0.1180	0.1998	0.1741	-10.501	026.35	033
-02.80	-0.4915	01.676	-0.4469	0.9252	0.9023	1.0789	0.0268	-0.0666	0.2097	0.1767	-10.358	026.25	034
-04.10	-0.7219	02.440	-0.6555	0.9538	0.9045	1.0804	0.0097	-0.0702	0.2147	0.1759	-10.267	026.35	035
-05.48	-0.9877	03.290	-0.8964	0.9993	0.9091	1.0876	0.0165	-0.0168	0.2187	0.1785	-10.119	026.29	036
-06.85	-1.2575	04.087	-1.1412	1.0435	0.8999	1.0901	0.0175	0.0414	0.2202	0.1901	-09.873	026.32	037
-08.18	-1.5449	04.890	-1.4018	1.1064	0.8957	1.0869	0.0126	0.0530	0.2237	0.1912	-09.616	026.29	038
-09.31	-1.8169	05.619	-1.6479	1.1786	0.8964	1.0929	-0.0087	0.1474	0.2232	0.1965	-09.396	026.38	039
-10.17	-1.9977	06.091	-1.8080	1.2349	0.8961	1.0959	-0.0043	0.1649	0.2236	0.1999	-09.263	026.45	040
-10.69	-2.1344	06.427	-1.9320	1.2726	0.8923	1.0903	0.0035	0.1786	0.2242	0.1980	-09.148	026.38	041
-10.89	-2.1521	06.465	-1.9446	1.2836	0.8930	1.0921	-0.0042	0.2315	0.2239	0.1991	-09.127	026.25	042
-10.96	-2.1778	06.542	-1.9684	1.2894	0.8914	1.0889	-0.0224	0.2934	0.2212	0.1974	-09.127	026.32	043
-11.02	-2.2183	06.617	-2.0063	1.3027	0.8952	1.0956	-0.0029	0.1823	0.2248	0.2005	-09.062	026.38	044
-11.02	-2.1938	06.557	-1.9824	1.2969	0.8941	1.0941	-0.0063	0.1667	0.2231	0.2001	-09.080	026.41	045
-10.78	-2.1376	06.513	-1.9342	1.2702	0.8861	1.0840	-0.0078	0.2064	0.2223	0.1978	-09.256	026.29	046
-10.47	-2.0464	06.296	-1.8495	1.2531	0.8961	1.0936	-0.0085	0.2020	0.2260	0.1975	-09.347	026.22	047
-10.11	-1.9778	06.142	-1.7893	1.2320	0.8987	1.0942	-0.0117	0.1424	0.2248	0.1955	-09.435	026.19	048
-09.76	-1.8748	05.829	-1.6951	1.2044	0.8995	1.0958	-0.0050	0.1382	0.2212	0.1963	-09.445	026.32	049
-09.40	-1.8184	05.729	-1.6466	1.1871	0.9022	1.0977	-0.0090	0.1377	0.2254	0.1955	-09.572	026.38	050
-09.01	-1.6929	05.472	-1.5308	1.1552	0.9011	1.0959	-0.0065	0.1192	0.2249	0.1948	-09.820	026.32	051
-08.68	-1.6272	05.320	-1.4722	1.1386	0.9033	1.0959	0.0024	0.1401	0.2237	0.1926	-09.933	026.25	052
-08.31	-1.5183	05.028	-1.3720	1.1122	0.9024	1.0941	0.0007	0.1150	0.2244	0.1918	-10.062	026.32	053
-07.96	-1.4522	04.809	-1.3138	1.0908	0.8985	1.0888	-0.0034	0.0802	0.2233	0.1903	-10.060	026.41	054
-07.58	-1.3840	04.622	-1.2522	1.0817	0.9071	1.0941	0.0059	0.0638	0.2236	0.1870	-10.145	026.41	055
-07.24	-1.2996	04.417	-1.1746	1.0668	0.9104	1.0969	-0.0063	0.0665	0.2226	0.1866	-10.325	026.35	056

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 — HSWT TEST 89

RUN 004 MACH NO 1.018 RN/L 07407903 Q 1422 PSF TO 583 — 10/17/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
-06.87	-1.2326	04.249	-1.1152	1.0482	0.9073	1.0938	-0.0037	0.0261	0.2239	0.1866	-10.474	026.25	057
-06.56	-1.1480	03.997	-1.0364	1.0358	0.9106	1.0949	-0.0092	0.0384	0.2234	0.1843	-10.579	026.22	058
-06.23	-1.0512	03.699	-0.9465	1.0171	0.9085	1.0924	0.0032	0.0245	0.2214	0.1839	-10.690	026.25	059
-05.82	-1.0101	03.557	-0.9131	1.0042	0.9066	1.0879	0.0133	-0.0009	0.2204	0.1813	-10.698	026.32	060
-05.51	-0.9250	03.323	-0.8335	0.9938	0.9092	1.0865	0.0084	-0.0195	0.2206	0.1773	-10.913	026.38	061
-05.14	-0.8518	03.116	-0.7663	0.9882	0.9156	1.0884	0.0033	-0.0084	0.2208	0.1728	-11.114	026.38	062
-04.80	-0.7804	02.900	-0.7011	0.9759	0.9137	1.0865	0.0091	-0.0398	0.2195	0.1728	-11.290	026.35	063
-04.41	-0.7166	02.667	-0.6441	0.9679	0.9155	1.0890	0.0119	-0.0648	0.2222	0.1735	-11.306	026.29	064
-04.05	-0.6596	02.469	-0.5934	0.9591	0.9148	1.0860	0.0044	-0.0339	0.2184	0.1712	-11.374	026.29	065
-03.71	-0.6089	02.283	-0.5485	0.9510	0.9135	1.0837	0.0185	-0.0443	0.2164	0.1702	-11.389	026.35	066
-03.33	-0.5283	02.025	-0.4743	0.9420	0.9128	1.0830	0.0219	-0.0633	0.2156	0.1702	-11.648	026.35	067
-02.95	-0.4606	01.852	-0.4133	0.9306	0.9082	1.0783	0.0142	-0.0403	0.2143	0.1702	-12.214	026.35	068
-02.59	-0.3858	01.601	-0.3442	0.9279	0.9113	1.0822	0.0142	-0.0526	0.2120	0.1709	-12.602	026.29	069
-02.24	-0.3576	01.468	-0.3218	0.9215	0.9083	1.0779	0.0144	-0.0661	0.2088	0.1697	-12.471	026.29	070
-01.92	-0.2738	01.161	-0.2429	0.9257	0.9171	1.0871	0.0181	-0.0922	0.2069	0.1700	-12.887	026.25	071
-01.59	-0.2024	00.951	-0.1770	0.9168	0.9115	1.0812	0.0176	-0.0748	0.2023	0.1697	-14.282	026.29	072
-01.21	-0.1546	00.805	-0.1353	0.9096	0.9065	1.0770	0.0425	-0.1212	0.2000	0.1705	-15.828	026.32	073
-00.84	-0.0913	00.583	-0.0779	0.9119	0.9106	1.0815	0.0317	-0.1058	0.1974	0.1709	-19.304	026.29	074
-00.50	-0.0465	00.383	-0.0385	0.9115	0.9111	1.0808	0.0325	-0.1639	0.1964	0.1697	-25.022	026.25	075
-00.18	0.0212	00.139	0.0241	0.9141	0.9142	1.0839	0.0286	-0.1393	0.1933	0.1697	20.017	026.25	076
00.18	0.0824	-00.123	0.0795	0.9097	0.9095	1.0785	0.0392	-0.1415	0.1932	0.1690	-04.545	026.32	077
00.54	0.1231	-00.252	0.1146	0.9085	0.9073	1.0782	0.0248	-0.1059	0.1921	0.1709	-06.218	026.29	078
00.86	0.2104	-00.544	0.1967	0.9084	0.9053	1.0747	0.0422	-0.1451	0.1948	0.1694	-07.863	026.29	079
01.24	0.2686	-00.739	0.2489	0.9153	0.9097	1.0790	0.0349	-0.1598	0.1969	0.1694	-08.361	026.29	080
01.59	0.3306	-00.950	0.3051	0.9204	0.9116	1.0809	0.0523	-0.1699	0.1978	0.1694	-08.734	026.29	081
01.97	0.3882	-01.160	0.3567	0.9204	0.9076	1.0766	0.0520	-0.1827	0.1990	0.1690	-09.078	026.32	082
02.32	0.4441	-01.361	0.4069	0.9267	0.9095	1.0792	0.0517	-0.1669	0.2033	0.1697	-09.309	026.25	083
02.65	0.5137	-01.568	0.4714	0.9273	0.9046	1.0754	0.0679	-0.1953	0.2060	0.1709	-09.272	026.29	084
03.02	0.5991	-01.822	0.5504	0.9392	0.9089	1.0794	0.0507	-0.1996	0.2097	0.1705	-09.239	026.32	085
03.36	0.6577	-02.035	0.6029	0.9517	0.9147	1.0849	0.0506	-0.2204	0.2101	0.1702	-09.399	026.32	086
03.71	0.7119	-02.230	0.6513	0.9586	0.9144	1.0861	0.0575	-0.2325	0.2121	0.1717	-09.518	026.32	087
04.08	0.7793	-02.461	0.7122	0.9685	0.9153	1.0892	0.0609	-0.2528	0.2138	0.1739	-09.594	026.29	088
04.77	0.8997	-02.836	0.8206	0.9849	0.9132	1.0878	0.0667	-0.2552	0.2163	0.1746	-09.575	026.25	090
05.11	0.9835	-03.070	0.8983	0.9971	0.9131	1.0933	0.0682	-0.2571	0.2161	0.1802	-09.483	026.29	091
05.50	1.0739	-03.341	0.9812	1.0146	0.9160	1.0984	0.0596	-0.2771	0.2156	0.1824	-09.451	026.22	092
05.86	1.1180	-03.514	1.0186	1.0263	0.9170	1.1006	0.0583	-0.2874	0.2185	0.1836	-09.550	026.25	093
06.25	1.2129	-03.779	1.1065	1.0383	0.9118	1.0965	0.0627	-0.2720	0.2175	0.1847	-09.465	026.29	094
07.69	1.4934	-04.621	1.3578	1.1042	0.9126	1.1022	0.0702	-0.2818	0.2208	0.1896	-09.401	026.22	098
08.77	1.7507	-05.316	1.5918	1.1637	0.9072	1.1010	0.0675	-0.3021	0.2198	0.1937	-09.224	026.25	101
09.08	1.8288	-05.517	1.6624	1.1862	0.9089	1.1014	0.0577	-0.2234	0.2171	0.1926	-09.165	026.25	102
09.37	1.8628	-05.602	1.6911	1.1928	0.9016	1.0953	0.0680	-0.2647	0.2197	0.1937	-09.136	026.25	103
09.55	1.9343	-05.776	1.7582	1.2077	0.8992	1.0959	0.0770	-0.2665	0.2180	0.1968	-09.072	026.25	104
09.76	1.9811	-05.891	1.8005	1.2190	0.8961	1.0894	0.0650	-0.2862	0.2176	0.1933	-09.034	026.32	105
09.92	2.0032	-05.927	1.8182	1.2318	0.9002	1.0962	0.0688	-0.3447	0.2198	0.1959	-08.988	026.32	106
10.07	2.0712	-06.093	1.8827	1.2436	0.8951	1.0873	0.0675	-0.3280	0.2215	0.1922	-08.938	026.25	107
10.37	2.1173	-06.178	1.9225	1.2563	0.8897	1.0827	0.0812	-0.3540	0.2200	0.1930	-08.865	026.22	108
10.50	2.1649	-06.306	1.9650	1.2773	0.8977	1.0922	0.0620	-0.3243	0.2179	0.1945	-08.849	026.22	109
10.58	2.1590	-06.306	1.9589	1.2712	0.8900	1.0825	0.0663	-0.2625	0.2183	0.1925	-08.874	026.38	110
10.60	2.1767	-06.354	1.9748	1.2804	0.8951	1.0907	0.0462	-0.3482	0.2181	0.1956	-08.868	026.51	111
10.60	2.1832	-06.369	1.9810	1.2826	0.8962	1.0918	0.0390	-0.3552	0.2184	0.1956	-08.863	026.58	112
00.05	0.0342	-00.048	0.0334	0.8960	0.8960	1.0614	0.0295	-0.0868	0.1928	0.1655	-04.223	025.74	103

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 — HSWT TEST 89

RUN 005 MACH NO 0.805 RN/L 07579055 Q 1277 PSF TJ 590 — 10/17/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
00.19	0.0318	-00.125	0.0302	0.4816	0.4815	0.4992	0.0307	-0.0405	0.1915	0.0177	-11.987	029.99	006
-10.44	-2.0349	06.383	-1.9136	0.8440	0.4832	0.5112	-0.0244	0.3198	0.2153	0.0281	-09.530	029.96	007
-10.09	-1.9437	06.117	-1.8291	0.8156	0.4825	0.5089	-0.0362	0.2956	0.2148	0.0264	-09.561	029.96	008
-09.77	-1.8549	05.807	-1.7461	0.7902	0.4824	0.5111	0.0016	0.2588	0.2200	0.0287	-09.511	029.99	009
-09.42	-1.7740	05.573	-1.6700	0.7733	0.4896	0.5150	0.0075	0.2581	0.2175	0.0254	-09.544	029.96	010
-09.04	-1.6779	05.291	-1.5800	0.7477	0.4901	0.5155	0.0061	0.2214	0.2172	0.0254	-09.580	029.99	011
-08.69	-1.6412	05.155	-1.5478	0.7353	0.4929	0.5167	-0.0058	0.1799	0.2204	0.0238	-09.542	030.05	012
-08.34	-1.5425	04.868	-1.4548	0.7103	0.4917	0.5149	-0.0205	0.2351	0.2193	0.0232	-09.588	029.99	013
-08.00	-1.4546	04.566	-1.3724	0.6867	0.4891	0.5112	-0.0099	0.1845	0.2207	0.0222	-09.536	030.05	014
-07.65	-1.3905	04.372	-1.3127	0.6725	0.4918	0.5158	-0.0154	0.1663	0.2206	0.0240	-09.552	029.86	015
-07.32	-1.2857	04.019	-1.2122	0.6548	0.4951	0.5177	-0.0211	0.1389	0.2207	0.0226	-09.496	029.83	016
-06.93	-1.2262	03.855	-1.1577	0.6378	0.4935	0.5143	-0.0110	0.1533	0.2167	0.0208	-09.552	029.80	017
-06.62	-1.1425	03.584	-1.0780	0.6222	0.4938	0.5162	-0.0124	0.1255	0.2196	0.0224	-09.530	029.80	018
-06.28	-1.0617	03.311	-1.0011	0.6086	0.4953	0.5165	-0.0066	0.1643	0.2187	0.0212	-09.475	029.96	019
-05.90	-1.0050	03.132	-0.9485	0.5983	0.4977	0.5167	-0.0075	0.1421	0.2188	0.0191	-09.467	030.09	020
-05.58	-0.9183	02.827	-0.8652	0.5884	0.5016	0.5245	-0.0018	0.2013	0.2207	0.0229	-09.354	030.02	021
-05.21	-0.8164	02.555	-0.7680	0.5683	0.4962	0.5198	0.0093	0.1926	0.2213	0.0236	-09.507	029.83	022
-04.87	-0.7536	02.325	-0.7087	0.5595	0.4974	0.5189	0.0135	0.1613	0.2191	0.0215	-09.373	029.80	023
-04.47	-0.7225	02.204	-0.6815	0.5514	0.4966	0.5190	0.0135	0.1452	0.2167	0.0224	-09.269	029.83	024
-04.08	-0.6426	01.925	-0.6054	0.5441	0.4996	0.5187	-0.0022	0.1280	0.2142	0.0191	-09.098	029.92	025
-03.75	-0.5806	01.717	-0.5468	0.5357	0.4988	0.5168	-0.0020	0.0964	0.2125	0.0180	-08.985	030.02	026
-03.37	-0.5223	01.533	-0.4922	0.5267	0.4968	0.5179	0.0018	0.0752	0.2113	0.0211	-08.917	029.99	027
-03.01	-0.4784	01.407	-0.4518	0.5178	0.4934	0.5157	0.0063	0.0107	0.2095	0.0224	-08.933	029.83	028
-02.66	-0.4180	01.184	-0.3945	0.5148	0.4959	0.5157	0.0060	0.0134	0.2074	0.0198	-08.603	029.80	029
-02.30	-0.3577	01.019	-0.3376	0.5097	0.4958	0.5143	0.0063	-0.0025	0.2052	0.0186	-08.651	029.83	030
-01.94	-0.2892	00.806	-0.2725	0.4996	0.4901	0.5068	0.0101	0.0081	0.1989	0.0167	-08.469	030.09	031
-01.61	-0.2370	00.671	-0.2230	0.5031	0.4966	0.5138	0.0189	-0.0565	0.2014	0.0171	-08.599	030.09	032
-01.24	-0.1678	00.445	-0.1572	0.4914	0.4879	0.5074	0.0069	0.0017	0.1990	0.0195	-08.056	029.92	033
-00.89	-0.1177	00.302	-0.1102	0.4876	0.4858	0.5046	0.0236	-0.0533	0.1956	0.0188	-07.794	029.83	034
-00.56	-0.0630	00.159	-0.0582	0.4882	0.4876	0.5068	0.0278	-0.0687	0.1957	0.0192	-07.646	029.86	035
-00.18	-0.0268	00.051	-0.0253	0.4849	0.4848	0.5039	0.0039	-0.0057	0.1939	0.0191	-05.829	029.92	036
00.17	0.0269	-00.093	0.0255	0.4821	0.4820	0.4989	0.0189	0.0066	0.1924	0.0169	-10.145	029.99	037
00.50	0.0681	-00.215	0.0638	0.4858	0.4853	0.5040	0.0031	-0.0200	0.1934	0.0187	-09.589	029.99	038
00.88	0.1365	-00.414	0.1291	0.4859	0.4839	0.5016	0.0219	-0.0308	0.1938	0.0177	-09.203	029.89	039
01.24	0.1858	-00.555	0.1752	0.4901	0.4862	0.5049	0.0012	0.0006	0.1949	0.0187	-09.075	029.89	040
01.60	0.2519	-00.691	0.2382	0.4926	0.4858	0.5039	0.0044	-0.0220	0.1937	0.0181	-08.338	029.96	041
01.96	0.3090	-00.847	0.2920	0.4994	0.4891	0.5066	0.0074	-0.0198	0.1960	0.0175	-08.330	030.02	042
02.32	0.3749	-01.032	0.3546	0.5078	0.4930	0.5113	0.0147	-0.0509	0.2039	0.0183	-08.365	029.96	043
02.70	0.4120	-01.143	0.3885	0.5085	0.4897	0.5090	0.0019	-0.0177	0.2006	0.0194	-08.426	029.89	044
03.05	0.4586	-01.290	0.4317	0.5181	0.4944	0.5137	0.0134	-0.0562	0.2041	0.0193	-08.542	029.83	045
03.37	0.5353	-01.508	0.5054	0.5236	0.4930	0.5116	0.0161	-0.0526	0.2032	0.0186	-08.558	029.96	046
03.74	0.6144	-01.762	0.5807	0.5342	0.4952	0.5133	0.0277	-0.1391	0.2064	0.0181	-08.712	029.96	047
04.09	0.6854	-01.970	0.6475	0.5535	0.5058	0.5245	0.0269	-0.1694	0.2086	0.0187	-08.734	030.02	048
04.45	0.7430	-02.137	0.7019	0.5574	0.5013	0.5207	0.0141	-0.1215	0.2092	0.0194	-08.739	029.86	049
04.81	0.8024	-02.341	0.7578	0.5633	0.4977	0.5152	0.0251	-0.1412	0.2080	0.0175	-08.862	029.89	050
05.15	0.8621	-02.584	0.8335	0.5792	0.5021	0.5202	0.0200	-0.1303	0.2113	0.0181	-08.900	029.96	051
05.53	0.9802	-02.877	0.9274	0.5920	0.4998	0.5202	0.0271	-0.1843	0.2136	0.0204	-08.917	029.96	052
05.89	1.0210	-03.056	0.9646	0.5988	0.4966	0.5159	0.0266	-0.2231	0.2126	0.0193	-09.094	029.96	053
06.28	1.1355	-03.414	1.0736	0.6253	0.5042	0.5252	0.0232	-0.1836	0.2131	0.0210	-09.135	029.89	054
06.61	1.1835	-03.590	1.1180	0.6338	0.5009	0.5229	0.0139	-0.2375	0.2133	0.0221	-09.215	029.99	055
06.97	1.2907	-03.887	1.2197	0.6598	0.5069	0.5278	-0.0007	-0.2411	0.2152	0.0209	-09.150	029.99	056

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 HSWT TEST 89

RUN 005 MACH NO 0.805 RN/L 07579055 Q 1277 PSF TO 590

10/17/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
07.36	1.3155	-03.969	1.2405	0.6649	0.5005	0.5214	0.0177	-0.2117	0.2123	0.0209	-09.165	029.96	057
07.72	1.4395	-04.376	1.3586	0.6948	0.5061	0.5277	0.0107	-0.2309	0.2133	0.0216	-09.235	029.86	058
08.07	1.5210	-04.644	1.4355	0.7106	0.5019	0.5234	0.0045	-0.2590	0.2124	0.0214	-09.275	029.83	059
08.43	1.5721	-04.817	1.4812	0.7287	0.5036	0.5232	0.0062	-0.2277	0.2136	0.0196	-09.308	029.89	060
08.76	1.6690	-05.111	1.5737	0.7459	0.4975	0.5205	-0.0128	-0.1820	0.2161	0.0231	-09.304	029.96	061
09.09	1.7572	-05.378	1.6562	0.7707	0.4992	0.5236	0.0050	-0.2249	0.2153	0.0244	-09.298	029.89	062
09.35	1.8084	-05.562	1.7035	0.7851	0.4980	0.5217	0.0040	-0.2796	0.2115	0.0237	-09.343	029.86	063
09.55	1.8454	-05.673	1.7365	0.8012	0.5020	0.5256	-0.0052	-0.2775	0.2162	0.0237	-09.339	029.89	064
09.73	1.9218	-05.905	1.8097	0.8170	0.4995	0.5232	-0.0153	-0.2573	0.2112	0.0237	-09.335	029.89	065
09.91	1.9654	-06.057	1.8499	0.8318	0.5012	0.5261	-0.0208	-0.2385	0.2130	0.0249	-09.362	029.89	066
09.98	1.9701	-06.073	1.8548	0.8268	0.4928	0.5194	-0.0009	-0.2608	0.2102	0.0266	-09.365	029.86	067
10.33	2.0623	-06.306	1.9395	0.8602	0.4986	0.5251	-0.0310	-0.2668	0.2107	0.0265	-09.289	029.92	068
10.48	2.0709	-06.352	1.9455	0.8677	0.4993	0.5264	-0.0074	-0.2968	0.2101	0.0271	-09.318	029.86	069
10.48	2.0938	-06.462	1.9691	0.8662	0.4937	0.5208	-0.0200	-0.2966	0.2093	0.0271	-09.376	029.86	070
10.50	2.1003	-06.491	1.9749	0.8694	0.4949	0.5208	-0.0043	-0.3177	0.2075	0.0259	-09.390	029.86	071
10.53	2.1222	-06.552	1.9959	0.8755	0.4961	0.5214	-0.0174	-0.2667	0.2068	0.0253	-09.380	029.92	072
10.58	2.1266	-06.579	1.9997	0.8763	0.4943	0.5225	-0.0252	-0.2774	0.2096	0.0282	-09.399	029.89	073
10.40	2.0814	-06.397	1.9576	0.8643	0.4967	0.5232	-0.0155	-0.3133	0.2082	0.0265	-09.337	029.89	074
00.01	0.0014	-00.058	0.0012	0.4709	0.4709	0.4927	0.0283	-0.0675	0.1918	0.0217	-30.097	029.89	075

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 — HSWT TEST 89

RUN 006 MACH NO 0.605 RN/L 06617933 Q 0902 PSF TO 594 — 10/17/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
00.17	0.0266	-00.130	0.0254	0.3910	0.3909	0.4019	0.0109	-0.0149	0.1844	0.0110	-14.859	031.41	006
-10.67	-2.0160	06.051	-1.9132	0.7344	0.3675	0.3888	-0.0656	0.4281	0.2138	0.0213	-09.119	031.34	007
-10.37	-1.8705	05.637	-1.7734	0.7008	0.3703	0.3896	-0.0434	0.3021	0.2180	0.0194	-09.156	031.44	008
-10.04	-1.8778	05.655	-1.7841	0.6944	0.3728	0.3912	-0.0337	0.3009	0.2227	0.0183	-09.149	031.31	009
-09.68	-1.7190	05.224	-1.6316	0.6579	0.3742	0.3927	-0.0314	0.3439	0.2129	0.0185	-09.232	031.28	010
-09.32	-1.6867	05.175	-1.6040	0.6415	0.3731	0.3902	-0.0375	0.3430	0.2167	0.0170	-09.321	031.31	011
-08.95	-1.5776	04.843	-1.5010	0.6095	0.3686	0.3895	-0.0512	0.3505	0.2140	0.0209	-09.326	031.25	012
-08.60	-1.4817	04.478	-1.4080	0.5989	0.3815	0.3983	-0.0407	0.2864	0.2117	0.0168	-09.182	031.28	013
-08.25	-1.4164	04.247	-1.3468	0.5822	0.3828	0.3934	-0.0254	0.2937	0.2140	0.0106	-09.108	031.31	014
-07.90	-1.3613	04.096	-1.2960	0.5645	0.3810	0.3958	-0.0143	0.2523	0.2127	0.0147	-09.141	031.28	015
-07.53	-1.2848	03.906	-1.2237	0.5472	0.3822	0.3918	-0.0148	0.2635	0.2081	0.0097	-09.236	031.31	016
-07.19	-1.1664	03.558	-1.1091	0.5278	0.3849	0.3966	-0.0213	0.2901	0.2087	0.0117	-09.266	031.41	017
-06.88	-1.1667	03.484	-1.1128	0.5169	0.3800	0.3934	-0.0142	0.2097	0.2084	0.0134	-09.071	031.41	018
-06.52	-1.0699	03.141	-1.0189	0.5072	0.3883	0.3984	-0.0034	0.2055	0.2058	0.0102	-08.919	031.34	019
-06.18	-0.9862	02.909	-0.9393	0.4863	0.3824	0.3947	-0.0156	0.2532	0.2044	0.0123	-08.963	031.31	020
-05.83	-0.9555	02.849	-0.9112	0.4815	0.3864	0.3939	-0.0140	0.1337	0.2060	0.0075	-09.057	031.34	021
-05.44	-0.8916	02.638	-0.8505	0.4744	0.3915	0.3975	-0.0201	0.1482	0.2058	0.0059	-08.988	031.28	022
-05.08	-0.8226	02.402	-0.7854	0.4548	0.3835	0.3917	-0.0191	0.0895	0.2033	0.0082	-08.870	031.37	023
-04.71	-0.7371	02.090	-0.7025	0.4500	0.3908	0.3986	0.0080	0.1014	0.2044	0.0079	-08.613	031.28	024
-04.34	-0.6672	01.897	-0.6354	0.4444	0.3950	0.4056	-0.0086	0.0754	0.2027	0.0107	-08.637	031.28	025
-03.97	-0.6121	01.757	-0.5836	0.4317	0.3903	0.3976	0.0013	0.1262	0.1973	0.0073	-08.720	031.31	026
-03.61	-0.5405	01.543	-0.5147	0.4267	0.3934	0.4017	0.0013	0.1057	0.1998	0.0083	-08.673	031.28	027
-03.26	-0.4814	01.316	-0.4586	0.4147	0.3880	0.3954	0.0014	0.0943	0.1985	0.0075	-08.307	031.41	028
-02.90	-0.4508	01.212	-0.4306	0.4122	0.3899	0.4005	0.0246	0.0182	0.2010	0.0106	-08.164	031.41	029
-02.54	-0.3737	00.982	-0.3559	0.4089	0.3928	0.4013	0.0076	0.0182	0.1963	0.0085	-07.984	031.31	030
-02.18	-0.3141	00.854	-0.2990	0.4038	0.3921	0.3985	0.0068	-0.0148	0.1955	0.0064	-08.257	031.25	031
-01.85	-0.2950	00.779	-0.2821	0.4065	0.3972	0.4031	0.0176	-0.0462	0.1959	0.0059	-08.024	031.28	032
-01.49	-0.2365	00.599	-0.2262	0.3973	0.3913	0.3972	0.0104	0.0043	0.1913	0.0059	-07.694	031.31	033
-01.12	-0.1672	00.400	-0.1595	0.3967	0.3915	0.4006	0.0206	-0.0132	0.1899	0.0090	-07.264	031.25	034
-00.76	-0.1148	00.272	-0.1096	0.3944	0.3929	0.4016	0.0245	0.0027	0.1872	0.0087	-07.184	031.28	035
-00.41	-0.0642	00.149	-0.0614	0.3987	0.3982	0.4042	0.0239	-0.0183	0.1882	0.0059	-07.039	031.28	036
-00.06	-0.0252	00.049	-0.0247	0.3995	0.3995	0.4070	0.0008	-0.0198	0.1874	0.0076	-05.870	031.31	037
00.30	0.0251	-00.076	0.0231	0.3914	0.3912	0.3988	0.0045	0.0432	0.1848	0.0076	-09.258	031.28	038
00.65	0.0510	-00.179	0.0464	0.3985	0.3980	0.4031	0.0268	-0.0116	0.1866	0.0052	-10.665	031.34	039
01.01	0.1276	-00.354	0.1207	0.3921	0.3899	0.3959	0.0207	-0.0227	0.1866	0.0059	-08.425	031.28	040
01.40	0.1847	-00.529	0.1751	0.3941	0.3898	0.3978	0.0202	-0.0565	0.1875	0.0080	-08.701	031.28	041
01.73	0.2104	-00.607	0.1984	0.3997	0.3936	0.3978	0.0082	-0.0113	0.1917	0.0043	-08.759	031.28	042
02.09	0.2927	-00.831	0.2780	0.4068	0.3964	0.4032	0.0073	-0.0206	0.1903	0.0068	-08.623	031.34	043
02.44	0.3168	-00.903	0.2997	0.4071	0.3940	0.4041	0.0293	-0.0629	0.1907	0.0101	-08.660	031.41	044
02.80	0.4082	-01.109	0.3884	0.4166	0.3971	0.4034	0.0174	-0.0635	0.1928	0.0063	-08.250	031.37	045
03.18	0.4433	-01.201	0.4209	0.4163	0.3923	0.3982	0.0338	-0.1175	0.1902	0.0059	-08.227	031.34	046
03.53	0.5213	-01.430	0.4957	0.4306	0.3993	0.4044	0.0222	-0.1532	0.1947	0.0052	-08.335	031.34	047
03.88	0.5544	-01.587	0.5263	0.4331	0.3965	0.4043	0.0157	-0.1057	0.1945	0.0078	-08.699	031.37	048
04.26	0.6111	-01.737	0.5802	0.4381	0.3939	0.4040	0.0146	-0.0811	0.1972	0.0101	-08.636	031.37	049
04.57	0.6633	-01.885	0.6296	0.4484	0.3969	0.4083	0.0255	-0.0904	0.1979	0.0115	-08.634	031.21	050
04.93	0.7479	-02.122	0.7113	0.4568	0.3939	0.4011	0.0076	-0.1022	0.1987	0.0072	-08.621	031.21	051
05.30	0.8014	-02.289	0.7618	0.4640	0.3916	0.3997	0.0232	-0.0737	0.1986	0.0080	-08.678	031.28	052
05.69	0.8687	-02.475	0.8252	0.4796	0.3955	0.4054	0.0342	-0.1413	0.2013	0.0099	-08.654	031.31	053
06.05	1.0016	-02.867	0.9542	0.4995	0.3961	0.4061	0.0499	-0.1701	0.1993	0.0100	-08.696	031.28	054
06.41	1.0549	-03.102	1.0033	0.5185	0.4033	0.4156	0.0723	-0.2470	0.2013	0.0123	-08.933	031.28	055
06.77	1.1167	-03.303	1.0627	0.5208	0.3919	0.4013	0.0488	-0.2587	0.2030	0.0099	-08.986	031.34	056

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 HSWT TEST 89

RUN 006 MACH NO 0.605 RN/L 06617933 Q 0902 PSF TO 594

10/17/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
07.13	1.2063	-03.555	1.1482	0.5397	0.3930	0.4029	0.0593	-0.3130	0.2042	0.0099	-08.952	031.34	057
07.47	1.2635	-03.750	1.2023	0.5491	0.3881	0.3995	0.0420	-0.2918	0.2039	0.0114	-09.017	031.28	058
07.88	1.3274	-03.953	1.2623	0.5614	0.3830	0.3944	0.0408	-0.2661	0.2037	0.0114	-09.048	031.28	059
08.22	1.3790	-04.165	1.3089	0.5847	0.3917	0.4039	0.0506	-0.2259	0.2068	0.0122	-09.176	031.34	060
08.60	1.5087	-04.511	1.4336	0.6102	0.3889	0.4015	0.0373	-0.2136	0.2103	0.0126	-09.083	031.31	061
08.91	1.5836	-04.765	1.5044	0.6281	0.3876	0.3975	0.0401	-0.2056	0.2099	0.0099	-09.141	031.31	062
09.20	1.6753	-04.952	1.5920	0.6492	0.3864	0.3947	0.0550	-0.2450	0.2073	0.0083	-08.980	031.31	063
09.45	1.6974	-05.043	1.6114	0.6567	0.3831	0.3930	0.0485	-0.2555	0.2098	0.0099	-09.026	031.34	064
09.66	1.8008	-05.316	1.7103	0.6837	0.3870	0.3993	0.0465	-0.2750	0.2103	0.0123	-08.968	031.31	065
09.84	1.7993	-05.345	1.7089	0.6764	0.3744	0.3867	0.0399	-0.2269	0.2103	0.0122	-09.024	031.34	066
09.97	1.8243	-05.419	1.7317	0.6862	0.3761	0.3869	0.0392	-0.2374	0.2123	0.0108	-09.024	031.37	067
10.17	1.8761	-05.571	1.7795	0.7050	0.3796	0.3881	0.0552	-0.3126	0.2066	0.0085	-09.021	031.37	068
10.43	1.9373	-05.803	1.8352	0.7309	0.3865	0.3965	0.0596	-0.3449	0.2112	0.0099	-09.100	031.31	069
10.54	1.9520	-05.845	1.8507	0.7248	0.3741	0.3837	0.0481	-0.4013	0.2070	0.0097	-09.096	031.31	070
10.58	1.9538	-05.926	1.8509	0.7315	0.3791	0.3888	0.0424	-0.4356	0.2058	0.0097	-09.214	031.31	071
10.56	1.9525	-05.963	1.8509	0.7255	0.3741	0.3864	0.0533	-0.3777	0.2098	0.0123	-09.278	031.31	072
10.62	1.9806	-05.927	1.8782	0.7301	0.3716	0.3839	0.0291	-0.1941	0.2127	0.0123	-09.092	031.31	073
10.33	1.9048	-05.649	1.8043	0.7237	0.3884	0.3998	0.0384	-0.3285	0.2115	0.0114	-09.009	031.28	074
-00.01	0.0124	-00.079	0.0124	0.3868	0.3868	0.3935	0.0155	0.0685	0.1827	0.0066	-19.396	031.31	070

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 HSWT TEST 89

RUN 007 MACH NO 0.603 RN/L 06930194 Q 0899 PSF TO 572

10/17/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
00.20	-0.0060	00.024	-0.0073	0.3758	0.3758	0.3668	0.0109	-0.0214	0.0021	-0.0090	-12.354	031.54	004
00.19	0.0210	-00.104	0.0197	0.3791	0.3791	0.3764	0.0119	-0.1133	0.0021	-0.0026	-15.038	031.60	005
00.19	0.0013	-00.028	0.0001	0.3683	0.3683	0.3695	0.0338	-0.1100	0.0021	0.0012	-62.513	031.44	006
-10.90	-2.0433	06.081	-1.9418	0.7219	0.3416	0.3574	0.0127	0.0451	0.0031	0.0157	-09.042	031.41	007
-10.62	-1.9480	05.878	-1.8503	0.7024	0.3494	0.3617	0.0099	0.0860	0.0024	0.0123	-09.166	031.31	008
-10.29	-1.8495	05.647	-1.7569	0.6765	0.3519	0.3678	0.0137	0.0564	0.0019	0.0159	-09.275	031.25	009
-09.91	-1.7918	05.425	-1.7041	0.6572	0.3542	0.3664	-0.0100	0.0926	-0.0017	0.0122	-09.198	031.34	010
-09.58	-1.7434	05.336	-1.6600	0.6404	0.3553	0.3654	0.0059	0.0386	0.0028	0.0101	-09.299	031.37	011
-09.23	-1.6237	04.915	-1.5447	0.6176	0.3618	0.3693	0.0318	-0.0300	0.0051	0.0076	-09.197	031.31	012
-08.86	-1.5906	04.787	-1.5166	0.5979	0.3574	0.3673	0.0310	-0.0388	0.0058	0.0099	-09.143	031.31	013
-08.52	-1.4647	04.517	-1.3944	0.5783	0.3653	0.3719	0.0439	0.0186	0.0025	0.0066	-09.369	031.28	014
-08.14	-1.3736	04.277	-1.3090	0.5492	0.3583	0.3618	0.0135	0.0874	0.0021	0.0035	-09.460	031.41	015
-07.80	-1.2732	03.914	-1.2113	0.5390	0.3697	0.3749	0.0352	0.0629	0.0007	0.0052	-09.339	031.34	016
-07.43	-1.2318	03.740	-1.1738	0.5249	0.3687	0.3772	0.0301	0.0406	0.0042	0.0085	-09.224	031.31	017
-07.10	-1.1553	03.459	-1.1015	0.5039	0.3640	0.3691	0.0350	0.0201	0.0040	0.0051	-09.097	031.44	018
-06.76	-1.0476	03.152	-0.9964	0.4937	0.3730	0.3788	0.0352	-0.0349	0.0054	0.0058	-09.140	031.54	019
-06.44	-1.0100	03.072	-0.9616	0.4853	0.3744	0.3804	0.0291	-0.0225	0.0028	0.0060	-09.241	031.54	020
-06.08	-0.8841	02.693	-0.8390	0.4700	0.3785	0.3825	0.0176	-0.0320	0.0033	0.0040	-09.245	031.37	021
-05.74	-0.8432	02.482	-0.8006	0.4655	0.3831	0.3836	0.0280	-0.0032	0.0023	0.0005	-08.943	031.37	022
-05.35	-0.8180	02.375	-0.7788	0.4568	0.3823	0.3851	0.0058	0.0062	0.0028	0.0028	-08.821	031.31	023
-05.00	-0.7360	02.149	-0.7003	0.4396	0.3769	0.3821	0.0047	0.0331	0.0010	0.0052	-08.869	031.31	024
-04.63	-0.6803	01.977	-0.6475	0.4324	0.3787	0.3827	0.0160	-0.0103	0.0027	0.0041	-08.826	031.21	025
-04.26	-0.6471	01.853	-0.6175	0.4203	0.3732	0.3765	-0.0008	-0.0117	0.0028	0.0033	-08.701	031.31	026
-03.90	-0.5764	01.597	-0.5490	0.4223	0.3840	0.3821	0.0159	-0.0640	0.0027	-0.0019	-08.419	031.37	027
-03.53	-0.5551	01.559	-0.5309	0.4097	0.3762	0.3774	0.0266	-0.0617	0.0033	0.0012	-08.532	031.31	028
-03.15	-0.4311	01.196	-0.4095	0.4051	0.3819	0.3831	0.0200	-0.0577	0.0022	0.0012	-08.424	031.37	029
-02.80	-0.4066	01.096	-0.3875	0.4008	0.3814	0.3772	0.0195	-0.0328	0.0020	-0.0042	-08.188	031.37	030
-02.44	-0.3194	00.874	-0.3031	0.3905	0.3773	0.3794	0.0134	-0.0428	0.0019	0.0021	-08.315	031.37	031
-02.08	-0.2810	00.720	-0.2671	0.3894	0.3795	0.3778	0.0247	-0.0627	0.0023	-0.0017	-07.786	031.41	032
-01.75	-0.2426	00.618	-0.2309	0.3891	0.3819	0.3803	0.0296	-0.0486	0.0017	-0.0017	-07.737	031.44	033
-01.40	-0.1676	00.366	-0.1583	0.3847	0.3807	0.3769	0.0292	-0.0341	0.0019	-0.0038	-06.638	031.47	034
-01.02	-0.1116	00.245	-0.1049	0.3788	0.3769	0.3769	0.0408	-0.1018	0.0023	-0.0000	-06.660	031.41	035
-00.66	-0.0753	00.174	-0.0709	0.3809	0.3801	0.3836	0.0064	-0.0246	0.0008	0.0036	-07.012	031.28	036
-00.31	-0.0367	00.099	-0.0347	0.3800	0.3798	0.3777	-0.0046	-0.0726	0.0013	-0.0021	-08.195	031.31	037
00.05	0.0065	00.001	0.0062	0.3779	0.3779	0.3775	0.0171	-0.0564	0.0032	-0.0004	00.332	031.31	038
00.40	0.0519	-00.153	0.0493	0.3800	0.3797	0.3783	0.0394	-0.0862	0.0009	-0.0014	-08.947	031.25	039
00.76	0.1021	-00.301	0.0971	0.3820	0.3807	0.3786	0.0110	-0.0770	0.0025	-0.0021	-08.965	031.34	040
01.12	0.1459	-00.374	0.1385	0.3830	0.3802	0.3785	0.0221	-0.0983	0.0046	-0.0017	-07.789	031.41	041
01.48	0.1905	-00.474	0.1806	0.3850	0.3802	0.3778	0.0279	-0.1430	0.0020	-0.0024	-07.556	031.41	042
01.84	0.2360	-00.578	0.2236	0.3912	0.3838	0.3821	0.0271	-0.0606	0.0025	-0.0017	-07.438	031.31	043
02.23	0.3044	-00.750	0.2894	0.3924	0.3809	0.3804	0.0263	-0.0469	0.0045	-0.0004	-07.481	031.28	044
02.56	0.3458	-00.867	0.3287	0.3924	0.3773	0.3752	0.0040	-0.0720	0.0029	-0.0021	-07.613	031.34	045
02.91	0.4223	-01.092	0.4026	0.4000	0.3791	0.3756	0.0206	-0.1369	0.0037	-0.0035	-07.858	031.37	046
03.28	0.4726	-01.235	0.4499	0.4082	0.3818	0.3808	0.0370	-0.0987	0.0011	-0.0010	-07.937	031.31	047
03.63	0.5318	-01.424	0.5071	0.4065	0.3736	0.3771	0.0252	-0.1091	0.0009	0.0035	-08.136	031.34	048
03.99	0.5790	-01.565	0.5520	0.4081	0.3687	0.3739	0.0249	-0.1303	0.0021	0.0051	-08.211	031.41	049
04.34	0.6031	-01.681	0.5727	0.4235	0.3790	0.3804	0.0192	-0.0963	0.0038	0.0014	-08.470	031.37	050
04.68	0.7404	-01.998	0.7075	0.4324	0.3732	0.3739	0.0236	-0.1036	0.0045	0.0007	-08.198	031.41	051
05.07	0.8172	-02.278	0.7804	0.4510	0.3803	0.3810	0.0449	-0.0846	0.0020	0.0007	-08.468	031.41	052
05.43	0.8596	-02.441	0.8206	0.4514	0.3717	0.3757	0.0564	-0.1290	0.0055	0.0040	-08.628	031.41	053
05.77	0.9125	-02.604	0.8696	0.4706	0.3808	0.3836	0.0339	-0.1536	0.0053	0.0028	-08.669	031.37	054

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 HSWT TEST 89

RUN 007 MACH NO 0.603 RN/L 06930194 Q 0899 PSF TO 572

10/17/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
06.15	1.0056	-02.899	0.9595	0.4821	0.3764	0.3794	0.0220	-0.1522	0.0071	0.0030	-08.757	031.44	055
06.52	1.0889	-03.170	1.0387	0.5020	0.3809	0.3832	0.0160	-0.1509	0.0037	0.0023	-08.845	031.41	056
06.91	1.1354	-03.303	1.0814	0.5143	0.3805	0.3836	0.0210	-0.1138	0.0046	0.0030	-08.839	031.37	057
07.24	1.2259	-03.558	1.1687	0.5282	0.3767	0.3802	0.0374	-0.1672	0.0047	0.0036	-08.816	031.31	058
07.60	1.2745	-03.772	1.2136	0.5404	0.3752	0.3804	0.0206	-0.1682	0.0049	0.0052	-08.991	031.31	059
07.96	1.3915	-04.088	1.3272	0.5566	0.3673	0.3741	0.0073	-0.0604	0.0045	0.0068	-08.925	031.34	060
08.35	1.3988	-04.187	1.3296	0.5730	0.3738	0.3816	0.0307	-0.1510	0.0088	0.0078	-09.093	031.34	061
08.69	1.5033	-04.445	1.4303	0.5921	0.3693	0.3811	0.0232	-0.1124	0.0073	0.0118	-08.983	031.34	062
09.02	1.6372	-04.873	1.5584	0.6262	0.3743	0.3826	0.0311	-0.1363	0.0036	0.0083	-09.042	031.28	063
09.30	1.6455	-04.918	1.5648	0.6267	0.3656	0.3746	0.0242	-0.0649	0.0073	0.0090	-09.081	031.31	064
09.53	1.7689	-05.227	1.6838	0.6544	0.3666	0.3772	0.0153	-0.0009	0.0085	0.0106	-08.977	031.31	065
09.74	1.7522	-05.191	1.6651	0.6568	0.3657	0.3733	0.0214	-0.0238	0.0074	0.0075	-09.000	031.34	066
09.89	1.8836	-05.522	1.7920	0.6882	0.3701	0.3779	0.0127	0.0167	0.0087	0.0078	-08.905	031.34	067
10.02	1.8367	-05.441	1.7442	0.6842	0.3703	0.3779	0.0196	-0.0196	0.0098	0.0076	-08.999	031.31	068
10.26	1.9115	-05.643	1.8159	0.6995	0.3650	0.3749	0.0176	-0.0151	0.0108	0.0099	-08.968	031.34	069
10.47	1.9764	-05.790	1.8787	0.7093	0.3561	0.3684	0.0162	0.0117	0.0077	0.0123	-08.901	031.31	070
10.57	1.9831	-05.831	1.8835	0.7168	0.3591	0.3673	0.0095	0.0479	0.0065	0.0082	-08.933	031.34	071
10.59	2.0145	-05.987	1.9138	0.7251	0.3609	0.3716	0.0093	0.0267	0.0064	0.0107	-09.029	031.28	072
10.57	1.9632	-05.796	1.8644	0.7107	0.3566	0.3655	0.0277	-0.0326	0.0055	0.0090	-08.969	031.31	073
10.65	4.8840	-14.298	4.8381	0.6997	-0.2068	0.8946	0.0362	0.0633	0.0199	1.1015	-08.894	027.15	074
10.47	1.9934	-05.841	1.8918	0.7328	0.3769	0.3844	-0.0013	0.0332	0.0108	0.0075	-08.901	031.34	075
-00.01	0.0071	-00.027	0.0072	0.3763	0.3763	0.3744	0.0510	-0.0975	0.0025	-0.0019	-11.448	031.31	076
-00.01	0.0071	-00.027	0.0071	0.3708	0.3708	0.3720	0.0395	-0.0871	0.0025	0.0012	-11.379	031.34	077
00.02	-0.0042	-00.030	-0.0043	0.3720	0.3720	0.3732	0.0464	-0.1702	0.0065	0.0012	21.941	031.28	078

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 — HSWT TEST 89

RUN 009 MACH NO 0.808 RN/L 07667581 Q 1304 PSF TD 594 — 10/17/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
00.22	0.0314	-00.088	0.0296	0.4676	0.4675	0.4785	0.0198	-0.0848	-0.0022	0.0110	-08.458	030.54	005
00.22	0.0457	-00.123	0.0439	0.4709	0.4707	0.4846	0.0280	-0.1647	0.0012	0.0139	-08.170	030.57	006
-10.76	-2.1481	06.609	-2.0233	0.8593	0.4666	0.4894	-0.0163	-0.1169	0.0049	0.0228	-09.346	030.44	000
-10.39	-2.0474	06.402	-1.9292	0.8308	0.4692	0.4925	-0.0182	-0.0259	0.0032	0.0233	-09.500	030.44	008
-10.06	-1.9383	06.105	-1.8262	0.8022	0.4728	0.4935	-0.0185	-0.0385	0.0031	0.0227	-09.568	030.54	009
-09.71	-1.8403	05.796	-1.7334	0.7809	0.4773	0.4980	0.0112	-0.0618	0.0028	0.0207	-09.569	030.47	010
-09.37	-1.7783	05.563	-1.6765	0.7627	0.4796	0.5004	0.0331	-0.0932	0.0037	0.0208	-09.534	030.41	011
-09.02	-1.7166	05.361	-1.6208	0.7395	0.4763	0.4954	0.0276	-0.0490	0.0010	0.0191	-09.488	030.47	012
-08.64	-1.5868	04.999	-1.4964	0.7144	0.4814	0.5011	0.0061	-0.0373	0.0011	0.0197	-09.571	030.63	013
-08.29	-1.5538	04.906	-1.4673	0.7057	0.4868	0.5057	0.0206	-0.0649	0.0050	0.0190	-09.593	030.50	014
-07.94	-1.4029	04.463	-1.3220	0.6773	0.4881	0.5065	-0.0022	-0.0176	0.0022	0.0184	-09.666	030.41	015
-07.60	-1.3136	04.149	-1.2382	0.6523	0.4828	0.5016	0.0043	-0.0750	0.0036	0.0188	-09.595	030.34	016
-07.27	-1.2847	04.009	-1.2138	0.6377	0.4791	0.4961	0.0003	-0.0970	0.0029	0.0170	-09.481	030.44	017
-06.90	-1.2328	03.871	-1.1660	0.6261	0.4815	0.5005	-0.0086	-0.0875	0.0039	0.0190	-09.539	030.47	018
-06.57	-1.1173	03.549	-1.0549	0.6068	0.4822	0.5018	-0.0001	-0.0456	0.0005	0.0196	-09.650	030.38	019
-06.23	-1.0438	03.296	-0.9852	0.5936	0.4831	0.5029	0.0138	-0.0380	0.0024	0.0198	-09.593	030.44	020
-05.85	-0.9705	03.013	-0.9163	0.5790	0.4826	0.5012	0.0124	-0.0409	0.0058	0.0187	-09.431	030.54	021
-05.55	-0.9072	02.808	-0.8555	0.5754	0.4900	0.5071	0.0083	-0.0712	0.0043	0.0172	-09.402	030.44	022
-05.18	-0.8148	02.506	-0.7676	0.5577	0.4861	0.5037	0.0265	-0.0156	0.0070	0.0176	-09.342	030.44	023
-04.82	-0.7692	02.346	-0.7260	0.5451	0.4822	0.4981	0.0225	-0.0146	0.0064	0.0159	-09.266	030.54	024
-04.42	-0.6950	02.101	-0.6556	0.5357	0.4835	0.4984	0.0222	-0.0118	0.0059	0.0149	-09.185	030.57	025
-04.06	-0.6328	01.897	-0.5968	0.5308	0.4873	0.5028	0.0146	-0.0108	0.0051	0.0156	-09.108	030.41	026
-03.73	-0.5954	01.732	-0.5627	0.5206	0.4829	0.4978	-0.0005	-0.0361	0.0033	0.0149	-08.837	030.41	027
-03.34	-0.5198	01.501	-0.4907	0.5123	0.4828	0.4971	0.0108	-0.0397	0.0031	0.0142	-08.771	030.41	028
-03.01	-0.4344	01.285	-0.4085	0.5043	0.4822	0.4948	0.0022	-0.0062	0.0032	0.0126	-08.987	030.54	029
-02.63	-0.3846	01.118	-0.3619	0.5018	0.4846	0.4969	0.0021	-0.0124	0.0024	0.0122	-08.829	030.47	030
-02.27	-0.3375	00.946	-0.3180	0.4999	0.4869	0.5003	0.0063	-0.0506	0.0007	0.0134	-08.518	030.41	031
-01.94	-0.2740	00.749	-0.2576	0.4883	0.4793	0.4920	0.0020	-0.0328	0.0019	0.0127	-08.299	030.44	032
-01.59	-0.2253	00.591	-0.2119	0.4866	0.4805	0.4933	0.0217	-0.0851	0.0022	0.0128	-07.968	030.41	033
-01.24	-0.1587	00.434	-0.1483	0.4843	0.4810	0.4920	0.0208	-0.0669	0.0027	0.0111	-08.300	030.47	034
-00.86	-0.0924	00.242	-0.0853	0.4791	0.4778	0.4905	0.0053	-0.0836	0.0002	0.0127	-07.956	030.44	035
-00.54	-0.0699	00.171	-0.0654	0.4760	0.4753	0.4875	0.0282	-0.0867	0.0039	0.0122	-07.433	030.50	036
-00.16	-0.0167	00.032	-0.0153	0.4792	0.4792	0.4871	0.0164	-0.1028	0.0017	0.0079	-05.876	030.63	037
00.17	0.0319	-00.088	0.0305	0.4799	0.4798	0.4890	0.0160	-0.1021	0.0005	0.0092	-08.362	030.60	038
00.56	0.0851	-00.213	0.0804	0.4805	0.4797	0.4910	0.0154	-0.0695	0.0014	0.0113	-07.499	030.38	039
00.92	0.1429	-00.349	0.1353	0.4755	0.4733	0.4866	0.0152	-0.1091	0.0018	0.0133	-07.420	030.34	040
01.25	0.1901	-00.467	0.1798	0.4750	0.4709	0.4835	0.0223	-0.1140	0.0027	0.0126	-07.469	030.41	041
01.64	0.2249	-00.553	0.2113	0.4788	0.4726	0.4837	0.0259	-0.1285	0.0029	0.0111	-07.470	030.47	042
01.99	0.2819	-00.727	0.2653	0.4829	0.4734	0.4851	-0.0022	-0.0662	0.0030	0.0117	-07.833	030.50	043
02.35	0.3268	-00.869	0.3072	0.4857	0.4727	0.4856	0.0170	-0.1025	0.0046	0.0129	-08.075	030.50	044
02.70	0.4038	-01.071	0.3810	0.4930	0.4745	0.4856	0.0043	-0.0696	0.0057	0.0112	-08.055	030.57	045
03.05	0.4689	-01.270	0.4428	0.5017	0.4774	0.4887	0.0237	-0.1541	0.0054	0.0112	-08.230	030.50	046
03.35	0.5382	-01.453	0.5092	0.5113	0.4806	0.4924	0.0151	-0.1138	0.0063	0.0118	-08.200	030.41	047
03.75	0.6032	-01.659	0.5705	0.5179	0.4795	0.4917	0.0066	-0.1129	0.0086	0.0123	-08.355	030.44	048
04.12	0.6691	-01.868	0.6330	0.5252	0.4783	0.4911	0.0174	-0.1083	0.0072	0.0127	-08.481	030.44	049
04.48	0.7360	-02.062	0.6960	0.5394	0.4834	0.4956	0.0047	-0.0595	0.0073	0.0123	-08.512	030.44	050
04.84	0.7869	-02.243	0.7435	0.5455	0.4808	0.4942	-0.0108	-0.1015	0.0087	0.0134	-08.658	030.44	051
05.18	0.8581	-02.467	0.8112	0.5559	0.4804	0.4955	0.0116	-0.0873	0.0076	0.0151	-08.735	030.38	052
05.56	0.9739	-02.821	0.9229	0.5711	0.4789	0.4961	-0.0044	-0.1513	0.0093	0.0172	-08.800	030.44	053
05.92	1.0436	-03.059	0.9886	0.5842	0.4790	0.4962	-0.0136	-0.1172	0.0105	0.0172	-08.905	030.41	054
06.28	1.1381	-03.363	1.0786	0.6024	0.4808	0.4992	-0.0092	-0.0441	0.0105	0.0184	-08.976	030.41	055

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 HSWT TEST 89

RUN 008 MACH NO 0.808 RN/L 07667581 Q 1304 PSF TO 594

10/17/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
06.64	1.1897	-03.550	1.1259	0.6166	0.4823	0.4990	-0.0024	-0.1045	0.0126	0.0167	-09.065	030.44	056
07.00	1.2643	-03.789	1.1962	0.6321	0.4816	0.5000	-0.0123	-0.0769	0.0133	0.0184	-09.105	030.41	057
07.36	1.3415	-04.026	1.2691	0.6465	0.4785	0.4985	-0.0103	-0.0954	0.0126	0.0200	-09.117	030.44	058
07.72	1.4224	-04.292	1.3451	0.6665	0.4798	0.4991	-0.0322	-0.0606	0.0129	0.0193	-09.167	030.41	059
08.10	1.4751	-04.488	1.3928	0.6829	0.4798	0.4980	-0.0379	-0.0320	0.0117	0.0181	-09.244	030.44	060
08.43	1.5900	-04.846	1.5018	0.7121	0.4842	0.5047	-0.0252	-0.0550	0.0092	0.0205	-09.259	030.41	061
08.79	1.6748	-05.115	1.5814	0.7327	0.4825	0.5046	-0.0239	-0.0316	0.0069	0.0221	-09.278	030.44	062
09.12	1.7581	-05.369	1.6600	0.7513	0.4787	0.5013	-0.0373	-0.0614	0.0068	0.0226	-09.278	030.41	063
09.37	1.8248	-05.581	1.7224	0.7698	0.4790	0.5016	-0.0239	-0.0380	0.0073	0.0226	-09.291	030.41	064
09.60	1.8669	-05.732	1.7615	0.7803	0.4756	0.4993	-0.0369	-0.0202	0.0063	0.0237	-09.327	030.44	065
09.78	1.8921	-05.830	1.7843	0.7876	0.4731	0.4974	-0.0300	-0.0087	0.0052	0.0243	-09.360	030.41	066
09.93	1.9447	-05.971	1.8336	0.8033	0.4750	0.4991	-0.0429	-0.0075	0.0052	0.0242	-09.328	030.44	067
10.06	2.0114	-06.177	1.8976	0.8190	0.4749	0.5015	-0.0446	-0.0039	0.0051	0.0266	-09.329	030.41	068
10.35	2.0714	-06.338	1.9522	0.8405	0.4761	0.5003	-0.0577	-0.0019	0.0053	0.0242	-09.296	030.44	069
10.51	2.0997	-06.415	1.9785	0.8465	0.4715	0.4985	-0.0235	-0.0181	0.0000	0.0270	-09.282	030.44	070
10.51	2.1161	-06.478	1.9945	0.8505	0.4726	0.4985	-0.0513	0.0104	0.0033	0.0259	-09.330	030.41	071
10.58	2.1428	-06.558	2.0195	0.8582	0.4727	0.4992	-0.0517	-0.0130	0.0028	0.0265	-09.298	030.34	072
10.61	2.1332	-06.551	2.0106	0.8529	0.4683	0.4957	-0.0513	-0.0372	0.0062	0.0275	-09.330	030.44	073
10.52	2.1237	-06.563	2.0015	0.8537	0.4737	0.4985	-0.0475	-0.0361	0.0035	0.0247	-09.389	030.41	074
10.40	2.0816	-06.420	1.9624	0.8387	0.4708	0.4977	-0.0275	0.0058	0.0022	0.0269	-09.369	030.47	075
00.04	0.0100	-00.037	0.0096	0.4635	0.4635	0.4774	0.0244	-0.1190	0.0011	0.0140	-11.298	030.38	076
00.07	0.0143	-00.055	0.0138	0.4627	0.4627	0.4766	0.0357	-0.1081	0.0003	0.0139	-11.641	030.41	077

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 HSWT TEST 89

RUN 009 MACH NO 1.021 RN/L 07307867 Q 1450 PSF TO 597

10/17/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
00.27	0.0333	-00.114	0.0291	0.8803	0.8801	1.0414	0.0252	-0.0765	-0.0017	0.1613	-10.398	026.73	005
00.25	0.0171	-00.066	0.0134	0.8684	0.8684	1.0264	0.0326	-0.0909	-0.0021	0.1580	-11.774	026.64	006
-10.46	-2.0922	06.283	-1.9001	1.2323	0.8670	1.0561	0.0457	-0.1574	0.0022	0.1891	-09.123	026.83	007
-10.12	-1.9911	06.056	-1.8069	1.2081	0.8717	1.0588	0.0340	-0.0977	-0.0041	0.1872	-09.240	026.80	008
-09.76	-1.9112	05.895	-1.7351	1.1865	0.8752	1.0615	0.0329	-0.0963	-0.0007	0.1863	-09.371	026.70	009
-09.38	-1.7718	05.551	-1.6057	1.1510	0.8739	1.0591	0.0280	-0.0930	-0.0003	0.1852	-09.518	026.83	010
-09.05	-1.7312	05.455	-1.5713	1.1408	0.8795	1.0650	0.0273	-0.0701	0.0000	0.1855	-09.573	026.83	011
-08.67	-1.6090	05.121	-1.4574	1.1161	0.8836	1.0668	0.0259	-0.1158	0.0003	0.1832	-09.668	026.83	012
-08.32	-1.5651	04.988	-1.4203	1.1035	0.8864	1.0684	0.0245	-0.0616	-0.0029	0.1820	-09.682	026.73	013
-07.97	-1.4674	04.704	-1.3303	1.0813	0.8864	1.0673	0.0295	-0.0986	-0.0008	0.1809	-09.740	026.77	014
-07.61	-1.4025	04.561	-1.2724	1.0664	0.8884	1.0671	0.0244	-0.0817	-0.0002	0.1786	-09.880	026.77	015
-07.27	-1.2948	04.296	-1.1716	1.0474	0.8907	1.0682	0.0258	-0.0975	-0.0015	0.1775	-10.080	026.77	016
-06.91	-1.2349	04.113	-1.1193	1.0288	0.8866	1.0620	0.0311	-0.0852	-0.0007	0.1753	-10.118	026.86	017
-06.57	-1.1487	03.841	-1.0391	1.0170	0.8913	1.0613	0.0258	-0.0874	-0.0014	0.1700	-10.158	026.96	018
-06.24	-1.0932	03.636	-0.9899	1.0036	0.8900	1.0621	0.0212	-0.0837	-0.0017	0.1721	-10.196	026.90	019
-05.85	-1.0201	03.436	-0.9230	0.9989	0.8995	1.0724	0.0231	-0.1011	-0.0012	0.1729	-10.233	026.64	020
-05.55	-0.9442	03.247	-0.8534	0.9799	0.8927	1.0676	0.0179	-0.0905	-0.0020	0.1748	-10.446	026.51	021
-05.18	-0.8690	03.005	-0.7849	0.9672	0.8923	1.0548	0.0264	-0.0908	0.0008	0.1625	-10.504	026.67	022
-04.82	-0.8153	02.827	-0.7373	0.9596	0.8943	1.0550	0.0184	-0.0955	0.0007	0.1607	-10.533	026.70	023
-04.42	-0.7540	02.619	-0.6830	0.9460	0.8905	1.0500	0.0166	-0.0548	0.0002	0.1595	-10.553	026.83	024
-04.06	-0.7015	02.437	-0.6361	0.9460	0.8986	1.0590	0.0269	-0.0731	-0.0001	0.1604	-10.554	026.70	025
-03.72	-0.6275	02.221	-0.5677	0.9390	0.9002	1.0571	0.0094	-0.0811	-0.0003	0.1569	-10.751	026.64	026
-03.34	-0.5391	01.932	-0.4860	0.9263	0.8964	1.0529	0.0121	-0.0695	-0.0002	0.1565	-10.887	026.83	027
-02.99	-0.4926	01.777	-0.4453	0.9197	0.8952	1.0552	0.0082	-0.0470	0.0006	0.1599	-10.957	026.90	028
-02.61	-0.4376	01.587	-0.3961	0.9204	0.9015	1.0599	0.0117	-0.0808	0.0008	0.1584	-11.020	026.80	029
-02.26	-0.3657	01.327	-0.3300	0.9127	0.8990	1.0588	0.0089	-0.0646	-0.0008	0.1598	-11.028	026.73	030
-01.93	-0.3048	01.111	-0.2744	0.9067	0.8970	1.0659	0.0309	-0.0742	-0.0008	0.1689	-11.077	026.70	031
-01.61	-0.2582	00.938	-0.2330	0.9004	0.8935	1.0618	0.0253	-0.0743	-0.0016	0.1683	-11.035	026.70	032
-01.21	-0.1799	00.701	-0.1611	0.8951	0.8915	1.0577	0.0335	-0.0859	-0.0016	0.1662	-11.836	026.77	033
-00.86	-0.1250	00.510	-0.1116	0.8917	0.8899	1.0567	0.0385	-0.1058	-0.0030	0.1668	-12.396	026.83	034
-00.52	-0.0507	00.259	-0.0427	0.8939	0.8934	1.0635	0.0331	-0.1205	-0.0022	0.1701	-15.497	026.73	035
-00.20	-0.0115	00.098	-0.0085	0.8896	0.8895	1.0567	0.0060	-0.0652	-0.0025	0.1672	-25.862	026.80	036
00.18	0.0194	00.003	0.0166	0.8889	0.8888	1.0558	0.0316	-0.0753	-0.0011	0.1670	00.514	026.86	037
00.53	0.0842	-00.205	0.0760	0.8877	0.8869	1.0557	0.0522	-0.0774	-0.0013	0.1688	-07.383	026.73	038
00.89	0.1291	-00.364	0.1154	0.8876	0.8857	1.0504	0.0309	-0.1015	-0.0014	0.1647	-08.568	026.77	039
01.22	0.2052	-00.585	0.1864	0.8901	0.8860	1.0526	0.0334	-0.0912	-0.0019	0.1666	-08.662	026.80	040
01.59	0.2750	-00.827	0.2503	0.8917	0.8844	1.0499	0.0329	-0.1110	-0.0016	0.1655	-09.134	026.77	041
01.95	0.3475	-01.065	0.3174	0.8921	0.8808	1.0452	0.0353	-0.0931	-0.0016	0.1644	-09.315	026.77	042
02.27	0.4034	-01.270	0.3683	0.8938	0.8785	1.0448	0.0380	-0.1047	-0.0007	0.1663	-09.565	026.83	043
02.67	0.4614	-01.467	0.4197	0.9041	0.8836	1.0506	0.0301	-0.0600	-0.0013	0.1670	-09.659	026.77	044
03.01	0.5370	-01.717	0.4899	0.9072	0.8802	1.0475	0.0433	-0.0990	0.0002	0.1673	-09.714	026.80	045
03.34	0.5792	-01.866	0.5269	0.9143	0.8821	1.0523	0.0289	-0.1002	0.0001	0.1703	-09.786	026.77	046
03.68	0.6440	-02.074	0.5859	0.9229	0.8834	1.0517	0.0291	-0.0833	-0.0010	0.1684	-09.783	026.73	047
04.03	0.7094	-02.315	0.6458	0.9285	0.8808	1.0536	0.0378	-0.0940	0.0013	0.1728	-09.914	026.73	048
04.38	0.7835	-02.545	0.7139	0.9384	0.8811	1.0557	0.0333	-0.0918	0.0017	0.1746	-09.868	026.77	049
04.77	0.8572	-02.773	0.7805	0.9557	0.8875	1.0595	0.0319	-0.1100	0.0019	0.1720	-09.829	026.80	050
05.10	0.9414	-03.039	0.8587	0.9676	0.8873	1.0630	0.0438	-0.1253	0.0036	0.1756	-09.807	026.73	051
05.49	1.0061	-03.230	0.9165	0.9802	0.8880	1.0662	0.0420	-0.1141	0.0037	0.1781	-09.754	026.70	052
05.85	1.0639	-03.433	0.9680	0.9904	0.8866	1.0651	0.0392	-0.0572	0.0028	0.1785	-09.802	026.80	053
06.21	1.1525	-03.701	1.0495	1.0085	0.8890	1.0690	0.0408	-0.1028	0.0038	0.1800	-09.756	026.80	054
06.57	1.2083	-03.871	1.0986	1.0211	0.8887	1.0712	0.0323	-0.0863	0.0031	0.1825	-09.732	026.73	055

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 HSWT TEST 89

RUN 009 MACH NO 1.021 RN/L 07307867 Q 1450 PSF TO 597 10/17/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
06.88	1.2917	-04.108	1.1754	1.0409	0.8926	1.0724	0.0262	-0.0596	0.0037	0.1799	-09.662	026.77	056
07.30	1.3536	-04.274	1.2294	1.0556	0.8909	1.0715	0.0210	-0.0567	0.0040	0.1807	-09.594	026.80	057
07.66	1.4379	-04.525	1.3061	1.0761	0.8925	1.0742	0.0223	-0.0441	0.0043	0.1817	-09.560	026.73	058
08.02	1.5370	-04.773	1.3974	1.0983	0.8925	1.0741	0.0233	-0.0455	0.0027	0.1816	-09.434	026.70	059
08.38	1.6186	-05.002	1.4709	1.1208	0.8944	1.0753	0.0174	-0.0264	0.0020	0.1809	-09.388	026.73	060
08.74	1.6749	-05.194	1.5201	1.1350	0.8908	1.0761	0.0195	-0.0656	0.0027	0.1853	-09.422	026.77	061
09.08	1.7568	-05.395	1.5955	1.1490	0.8829	1.0726	0.0064	0.0027	0.0022	0.1807	-09.329	026.77	062
09.34	1.8352	-05.550	1.6673	1.1704	0.8842	1.0720	0.0152	-0.0065	-0.0017	0.1878	-09.187	026.73	063
09.60	1.8751	-05.654	1.7018	1.1818	0.8814	1.0696	0.0385	-0.0152	0.0007	0.1882	-09.161	026.67	064
09.78	1.9458	-05.846	1.7679	1.1986	0.8809	1.0687	0.0087	0.0204	0.0020	0.1878	-09.127	026.70	065
09.96	1.9803	-05.957	1.7979	1.2117	0.8826	1.0660	0.0182	-0.0047	0.0025	0.1835	-09.139	026.77	066
10.09	2.0173	-06.072	1.8322	1.2187	0.8789	1.0651	0.0017	0.1279	0.0028	0.1861	-09.145	026.73	067
10.36	2.0568	-06.149	1.8651	1.2356	0.8802	1.0634	0.0261	0.0452	0.0032	0.1832	-09.082	026.73	068
10.52	2.1132	-06.254	1.9180	1.2458	0.8748	1.0580	0.0172	0.0909	0.0010	0.1833	-08.991	026.80	069
10.60	2.1351	-06.312	1.9371	1.2562	0.8784	1.0640	0.0098	0.1203	0.0026	0.1855	-08.981	026.70	070
10.65	2.1471	-06.363	1.9483	1.2571	0.8754	1.0591	0.0097	0.0914	0.0023	0.1837	-09.004	026.73	071
10.68	2.1426	-06.334	1.9443	1.2520	0.8701	1.0549	0.0063	0.0901	0.0030	0.1848	-08.980	026.77	072
10.63	2.1517	-06.320	1.9532	1.2583	0.8764	1.0608	0.0068	0.0680	-0.0011	0.1844	-08.923	026.77	073
00.10	0.0127	-00.016	0.0112	0.8749	0.8749	1.0416	0.0567	-0.1516	-0.0027	0.1667	-03.848	026.73	074
00.10	0.0327	-00.079	0.0312	0.8781	0.8780	1.0465	0.0496	-0.1234	-0.0032	0.1685	-07.386	026.67	075

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 — MSWT TEST 89

RUN 010 MACH NO 1.017 RN/L 07236308 Q 1444 PSF TO 600 — 10/17/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
00.34	0.0258	00.073	0.0222	0.5923	0.5921	0.6525	0.0113	-0.0098	-0.0003	0.0603	08.608	026.83	005
00.34	0.0301	00.058	0.0265	0.5983	0.5982	0.6575	0.0115	-0.0171	-0.0007	0.0594	05.809	026.64	006
-10.83	-0.8357	-02.853	-0.7106	0.7336	0.5870	0.6969	0.0915	0.0785	-0.0013	0.1099	10.370	026.80	007
-10.64	-0.8399	-02.758	-0.7167	0.7335	0.5886	0.6914	0.0879	0.0987	-0.0043	0.1028	09.976	026.77	008
-10.47	-0.8118	-02.725	-0.6921	0.7222	0.5844	0.6840	0.0877	0.0397	-0.0026	0.0996	10.198	026.73	009
-10.28	-0.7854	-02.694	-0.6678	0.7186	0.5879	0.6885	0.0800	0.0750	-0.0035	0.1005	10.422	026.70	010
-10.09	-0.7686	-02.626	-0.6548	0.7077	0.5821	0.6817	0.0757	0.0668	-0.0032	0.0997	10.379	026.67	011
-09.86	-0.7448	-02.541	-0.6349	0.6962	0.5771	0.6785	0.0888	0.0315	-0.0001	0.1013	10.366	026.64	012
-09.67	-0.7212	-02.525	-0.6139	0.6899	0.5769	0.6796	0.0771	0.0968	-0.0020	0.1026	10.639	026.61	013
-09.48	-0.6895	-02.461	-0.5845	0.6859	0.5803	0.6787	0.0800	0.0664	-0.0019	0.0984	10.845	026.64	014
-09.27	-0.6741	-02.404	-0.5719	0.6815	0.5805	0.6798	0.0796	0.0505	-0.0020	0.0993	10.834	026.67	015
-09.10	-0.6457	-02.374	-0.5455	0.6768	0.5819	0.6775	0.0719	0.0486	-0.0025	0.0955	11.168	026.73	016
-08.91	-0.6344	-02.299	-0.5370	0.6710	0.5797	0.6750	0.0677	0.0545	-0.0031	0.0953	11.009	026.77	017
-08.70	-0.6081	-02.277	-0.5128	0.6692	0.5840	0.6764	0.0634	0.0608	-0.0012	0.0924	11.374	026.77	018
-08.51	-0.5951	-02.227	-0.5024	0.6642	0.5826	0.6737	0.0627	0.0680	-0.0007	0.0911	11.370	026.73	019
-08.32	-0.5720	-02.203	-0.4822	0.6558	0.5791	0.6711	0.0687	0.0765	0.0002	0.0920	11.701	026.77	020
-08.13	-0.5574	-02.148	-0.4690	0.6578	0.5849	0.6743	0.0653	0.0525	-0.0023	0.0894	11.707	026.77	021
-07.95	-0.5332	-02.101	-0.4471	0.6534	0.5853	0.6729	0.0677	0.0597	-0.0008	0.0876	11.973	026.83	022
-07.77	-0.5068	-02.059	-0.4231	0.6476	0.5845	0.6701	0.0670	0.0519	-0.0013	0.0856	12.346	026.86	023
-07.58	-0.4941	-02.011	-0.4128	0.6426	0.5825	0.6679	0.0593	0.0652	-0.0008	0.0853	12.368	026.83	024
-07.40	-0.4681	-01.971	-0.3885	0.6432	0.5878	0.6721	0.0554	0.0709	-0.0024	0.0843	12.790	026.83	025
-07.22	-0.4593	-01.907	-0.3819	0.6403	0.5873	0.6728	0.0583	0.0710	-0.0013	0.0855	12.610	026.80	026
-07.01	-0.4460	-01.837	-0.3710	0.6372	0.5871	0.6692	0.0537	0.0996	-0.0014	0.0821	12.515	026.77	027
-06.85	-0.4285	-01.806	-0.3556	0.6325	0.5856	0.6709	0.0473	0.0610	-0.0006	0.0854	12.808	026.70	028
-06.64	-0.4122	-01.747	-0.3419	0.6280	0.5842	0.6643	0.0471	0.0457	-0.0015	0.0801	12.871	026.73	029
-06.46	-0.3940	-01.729	-0.3256	0.6256	0.5850	0.6652	0.0507	0.0314	-0.0022	0.0802	13.335	026.70	030
-06.26	-0.3944	-01.694	-0.3279	0.6281	0.5886	0.6701	0.0512	0.0237	-0.0026	0.0815	13.048	026.54	031
-06.10	-0.3732	-01.647	-0.3085	0.6249	0.5886	0.6676	0.0508	0.0155	-0.0005	0.0790	13.405	026.61	032
-05.90	-0.3543	-01.607	-0.2922	0.6191	0.5857	0.6636	0.0398	0.0358	-0.0015	0.0779	13.782	026.61	033
-05.71	-0.3408	-01.562	-0.2808	0.6168	0.5858	0.6618	0.0434	0.0059	-0.0014	0.0760	13.922	026.70	034
-05.51	-0.3216	-01.538	-0.2636	0.6164	0.5882	0.6640	0.0497	0.0363	-0.0018	0.0758	14.529	026.73	035
-05.32	-0.3105	-01.485	-0.2545	0.6163	0.5901	0.6645	0.0464	0.0201	-0.0003	0.0743	14.532	026.73	036
-05.15	-0.2925	-01.467	-0.2379	0.6201	0.5962	0.6678	0.0426	0.0488	-0.0014	0.0715	15.238	026.70	037
-04.90	-0.2742	-01.433	-0.2224	0.6166	0.5953	0.6636	0.0459	0.0274	-0.0007	0.0682	15.881	026.64	038
-04.70	-0.2709	-01.345	-0.2215	0.6113	0.5911	0.6607	0.0354	0.0245	-0.0004	0.0696	15.087	026.67	039
-04.53	-0.2568	-01.311	-0.2092	0.6104	0.5919	0.6587	0.0349	0.0468	-0.0008	0.0668	15.510	026.64	040
-04.31	-0.2405	-01.268	-0.1957	0.6037	0.5873	0.6576	0.0384	0.0318	-0.0015	0.0703	16.011	026.73	041
-04.11	-0.2220	-01.229	-0.1789	0.6070	0.5926	0.6604	0.0345	0.0599	-0.0017	0.0678	16.820	026.73	042
-03.95	-0.2223	-01.161	-0.1810	0.6062	0.5923	0.6610	0.0455	0.0166	-0.0020	0.0687	15.863	026.77	043
-03.76	-0.2114	-01.125	-0.1719	0.6072	0.5947	0.6605	0.0349	0.0364	-0.0022	0.0658	16.163	026.77	044
-03.57	-0.1954	-01.101	-0.1582	0.6020	0.5910	0.6576	0.0415	0.0154	-0.0013	0.0666	17.122	026.83	045
-03.38	-0.1930	-01.056	-0.1576	0.6049	0.5946	0.6610	0.0452	0.0081	0.0002	0.0664	16.616	026.77	046
-03.20	-0.1744	-01.054	-0.1408	0.6058	0.5970	0.6607	0.0416	0.0150	-0.0022	0.0636	18.359	026.73	047
-02.98	-0.1675	-01.002	-0.1363	0.6038	0.5958	0.6565	0.0306	0.0425	-0.0019	0.0607	18.164	026.73	048
-02.79	-0.1449	-00.965	-0.1158	0.6037	0.5944	0.6537	0.0204	0.0107	-0.0017	0.0593	20.232	026.70	049
-02.60	-0.1491	-00.896	-0.1221	0.5962	0.5900	0.6516	0.0271	0.0113	-0.0003	0.0616	18.253	026.77	050
-02.44	-0.1467	-00.845	-0.1213	0.5987	0.5930	0.6518	0.0343	0.0048	-0.0011	0.0588	17.502	026.73	051
-02.23	-0.1318	-00.802	-0.1088	0.5960	0.5913	0.6508	0.0206	0.0163	-0.0028	0.0595	18.491	026.83	052
-02.06	-0.1253	-00.732	-0.1040	0.5939	0.5898	0.6488	0.0276	0.0022	-0.0014	0.0590	17.748	026.86	053
-01.87	-0.1113	-00.678	-0.0919	0.5963	0.5930	0.6515	0.0315	-0.0127	-0.0020	0.0585	18.501	026.86	054
-01.68	-0.1087	-00.594	-0.0912	0.5996	0.5967	0.6529	0.0395	-0.0788	-0.0001	0.0563	16.594	026.80	055

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 — HSWT TEST 89

RUN 010 MACH NO 1.017 RN/L 07236308 Q 1444 PSF TO 600 — 10/17/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
-01.50	-0.0912	-00.574	-0.0757	0.5960	0.5939	0.6529	0.0285	-0.0291	-0.0002	0.0590	19.130	026.73	056
-01.31	-0.1016	-00.456	-0.0881	0.5966	0.5944	0.6509	0.0107	0.0334	-0.0015	0.0565	13.624	026.73	057
-01.09	-0.0790	-00.415	-0.0678	0.5920	0.5906	0.6484	0.0183	-0.0176	-0.0014	0.0578	15.955	026.77	058
-00.91	-0.0695	-00.362	-0.0602	0.5925	0.5915	0.6495	0.0179	0.0265	-0.0030	0.0580	15.807	026.73	059
-00.72	-0.0674	-00.293	-0.0599	0.5941	0.5933	0.6514	0.0142	0.0549	-0.0013	0.0581	13.195	026.70	060
-00.53	-0.0557	-00.255	-0.0502	0.5920	0.5915	0.6504	0.0259	-0.0329	-0.0007	0.0589	13.883	026.77	061
-00.35	-0.0577	-00.169	-0.0541	0.5947	0.5944	0.6519	0.0188	-0.0055	-0.0001	0.0575	08.912	026.73	062
-00.16	-0.0476	-00.099	-0.0459	0.5940	0.5939	0.6522	0.0195	-0.0433	-0.0004	0.0583	06.297	026.64	063
00.03	-0.0331	-00.060	-0.0334	0.5923	0.5923	0.6510	-0.0051	-0.0182	-0.0010	0.0587	05.481	026.64	064
00.22	-0.0262	00.027	-0.0284	0.5943	0.5944	0.6520	0.0274	-0.1099	-0.0002	0.0576	-03.122	026.67	065
00.41	-0.0246	00.113	-0.0288	0.5929	0.5931	0.6515	0.0150	0.0131	-0.0003	0.0584	-13.964	026.73	066
00.60	-0.0015	00.118	-0.0077	0.5945	0.5946	0.6514	0.0113	-0.0026	0.0003	0.0568	-31.567	026.77	067
00.79	-0.0141	00.234	-0.0223	0.5965	0.5967	0.6511	0.0215	-0.0314	0.0003	0.0544	-50.176	026.73	068
00.98	0.0082	00.255	-0.0019	0.5946	0.5945	0.6524	0.0206	-0.0096	0.0007	0.0578	94.640	026.77	069
01.17	0.0234	00.310	0.0112	0.5992	0.5989	0.6554	0.0137	-0.0561	0.0012	0.0565	40.196	026.73	070
01.36	0.0183	00.395	0.0041	0.5990	0.5987	0.6568	0.0095	-0.0280	0.0002	0.0581	65.347	026.70	071
01.55	0.0370	00.433	0.0209	0.5974	0.5967	0.6538	0.0086	-0.0281	0.0002	0.0571	35.529	026.67	072
01.74	0.0440	00.485	0.0259	0.5973	0.5962	0.6562	0.0048	-0.0295	0.0000	0.0600	33.461	026.70	073
01.93	0.0547	00.536	0.0346	0.5973	0.5958	0.6541	0.0113	-0.0435	-0.0004	0.0583	29.778	026.77	074
02.12	0.0537	00.622	0.0315	0.5986	0.5970	0.6554	0.0106	-0.0298	0.0006	0.0584	35.203	026.73	075
02.34	0.0646	00.674	0.0402	0.5991	0.5969	0.6547	0.0067	-0.0456	0.0005	0.0577	31.737	026.73	076
02.52	0.0754	00.711	0.0489	0.6027	0.5999	0.6583	0.0131	-0.0305	0.0009	0.0584	28.660	026.73	077
02.68	0.0868	00.747	0.0588	0.6006	0.5972	0.6571	0.0059	-0.0613	0.0005	0.0599	26.152	026.73	078
02.87	0.0857	00.832	0.0557	0.6007	0.5972	0.6571	0.0088	-0.0545	0.0022	0.0599	29.495	026.73	079
03.08	0.0955	00.883	0.0635	0.5974	0.5931	0.6541	0.0079	-0.0252	-0.0004	0.0610	27.989	026.83	080
03.27	0.1065	00.934	0.0722	0.6039	0.5988	0.6604	0.0076	-0.0338	0.0009	0.0616	26.640	026.83	081
03.45	0.1179	00.987	0.0816	0.6055	0.5995	0.6606	0.0006	-0.0797	0.0023	0.0611	25.432	026.80	082
03.62	0.1327	01.026	0.0946	0.6077	0.6005	0.6617	0.0068	-0.0641	0.0010	0.0612	23.501	026.77	083
03.83	0.1552	01.068	0.1147	0.6089	0.5999	0.6627	0.0023	-0.0432	0.0012	0.0628	20.903	026.73	084
04.01	0.1630	01.127	0.1206	0.6109	0.6010	0.6656	0.0087	-0.0428	0.0017	0.0647	20.994	026.64	085
04.20	0.1676	01.167	0.1233	0.6103	0.5997	0.6671	-0.0020	-0.0672	0.0016	0.0674	21.150	026.54	086
04.38	0.1812	01.196	0.1351	0.6083	0.5962	0.6636	-0.0062	-0.0531	0.0014	0.0674	20.058	026.64	087
04.58	0.1914	01.264	0.1432	0.6090	0.5956	0.6628	-0.0069	-0.0463	0.0010	0.0673	20.069	026.67	088
04.77	0.2054	01.297	0.1551	0.6120	0.5970	0.6665	-0.0072	-0.0400	0.0023	0.0695	19.183	026.73	089
04.93	0.2171	01.336	0.1646	0.6169	0.6005	0.6702	-0.0109	-0.0560	0.0021	0.0697	18.698	026.70	090
05.16	0.2352	01.371	0.1801	0.6206	0.6019	0.6714	-0.0080	-0.0558	0.0014	0.0695	17.715	026.73	091
05.35	0.2493	01.407	0.1920	0.6238	0.6032	0.6751	-0.0017	-0.0333	0.0013	0.0719	17.144	026.77	092
05.51	0.2565	01.461	0.1974	0.6243	0.6025	0.6734	-0.0024	-0.0264	0.0019	0.0710	17.302	026.73	093
05.74	0.2835	01.503	0.2218	0.6284	0.6031	0.6757	-0.0064	-0.0495	0.0012	0.0726	16.107	026.70	094
05.93	0.2899	01.534	0.2263	0.6274	0.6007	0.6755	-0.0067	-0.0574	0.0025	0.0749	16.074	026.77	095
06.12	0.3054	01.557	0.2399	0.6273	0.5982	0.6747	-0.0108	-0.0579	0.0015	0.0765	15.485	026.73	096
06.29	0.3189	01.588	0.2511	0.6332	0.6019	0.6795	-0.0075	-0.0584	0.0025	0.0776	15.123	026.80	097
06.51	0.3362	01.637	0.2661	0.6342	0.6000	0.6813	-0.0149	-0.0600	0.0003	0.0813	14.790	026.86	098
06.70	0.3468	01.672	0.2744	0.6367	0.6004	0.6851	-0.0153	-0.0463	0.0011	0.0847	14.649	026.90	099
06.90	0.3695	01.731	0.2941	0.6457	0.6057	0.6892	-0.0196	-0.0407	0.0022	0.0834	14.230	026.86	100
07.11	0.3861	01.776	0.3080	0.6494	0.6063	0.6882	-0.0170	-0.0478	0.0030	0.0819	13.976	026.80	101
07.28	0.4091	01.800	0.3291	0.6519	0.6049	0.6874	-0.0143	-0.0472	0.0023	0.0825	13.368	026.77	102
07.50	0.4260	01.847	0.3435	0.6543	0.6039	0.6888	-0.0082	-0.0390	0.0024	0.0848	13.174	026.67	103
07.69	0.4322	01.913	0.3478	0.6535	0.6011	0.6858	-0.0156	-0.0553	0.0021	0.0847	13.446	026.70	104
07.86	0.4550	01.975	0.3696	0.6574	0.6007	0.6876	-0.0194	-0.0568	0.0029	0.0869	13.158	026.64	105
08.06	0.4703	02.028	0.3814	0.6607	0.6007	0.6880	-0.0162	-0.0493	0.0027	0.0873	13.103	026.64	106

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 — HSWT TEST 89

RUN 010 MACH NO 1.017 RN/L 07236308 Q 1444 PSF TO 600 — 10/17/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
08.28	0.4874	02.076	0.3959	0.6637	0.5998	0.6878	-0.0232	-0.0659	0.0032	0.0880	12.942	026.70	107
08.47	0.5162	02.078	0.4220	0.6708	0.6012	0.6880	-0.0271	-0.0443	0.0025	0.0868	12.226	026.73	108
08.67	0.5355	02.155	0.4385	0.6770	0.6031	0.6912	-0.0242	-0.0152	0.0028	0.0880	12.227	026.70	109
08.87	0.5355	02.260	0.4367	0.6747	0.5994	0.6880	-0.0453	-0.0344	0.0035	0.0886	12.822	026.67	110
09.06	0.5719	02.281	0.4702	0.6834	0.6008	0.6907	-0.0528	0.0009	0.0025	0.0899	12.116	026.70	111
09.24	0.6097	02.323	0.5056	0.6896	0.5995	0.6909	-0.0181	-0.0379	0.0039	0.0914	11.573	026.70	112
09.46	0.6238	02.411	0.5167	0.6946	0.6002	0.6931	-0.0219	-0.0249	0.0038	0.0929	11.741	026.70	113
09.63	0.6455	02.430	0.5358	0.7012	0.6017	0.6955	-0.0326	-0.0050	0.0035	0.0938	11.436	026.73	114
09.79	0.6679	02.466	0.5558	0.7066	0.6018	0.6959	-0.0325	-0.0420	0.0022	0.0941	11.220	026.73	115
09.94	0.6879	02.526	0.5735	0.7133	0.6036	0.6965	-0.0607	-0.0404	0.0046	0.0929	11.157	026.70	116
10.10	0.7033	02.582	0.5870	0.7148	0.6008	0.6977	-0.0502	-0.0757	0.0022	0.0969	11.153	026.70	117
10.24	0.7351	02.583	0.6164	0.7226	0.6014	0.6970	-0.0474	-0.0311	0.0033	0.0956	10.675	026.73	118
10.33	0.7414	02.636	0.6220	0.7219	0.5987	0.6958	-0.0587	0.0400	0.0045	0.0971	10.801	026.73	119
10.47	0.7579	02.657	0.6375	0.7212	0.5934	0.6930	-0.0443	-0.0606	0.0055	0.0996	10.651	026.73	120
10.55	0.7819	02.668	0.6583	0.7352	0.6022	0.7021	-0.0271	-0.0361	0.0042	0.0998	10.366	026.70	121
10.66	0.7823	02.722	0.6581	0.7325	0.5981	0.6970	-0.0486	-0.0175	0.0035	0.0990	10.572	026.67	122
10.72	0.8041	02.735	0.6788	0.7374	0.5983	0.6980	-0.0524	-0.0255	0.0038	0.0998	10.334	026.61	123
10.75	0.7933	02.756	0.6667	0.7417	0.6044	0.7037	-0.0513	-0.0637	0.0050	0.0994	10.555	026.67	124
10.92	0.8094	02.789	0.6809	0.7431	0.6007	0.7013	-0.0380	-0.0100	0.0036	0.1006	10.469	026.70	125
11.01	0.8258	02.822	0.6960	0.7469	0.6003	0.7022	-0.0382	0.0185	0.0036	0.1019	10.381	026.73	126
11.15	0.8388	02.866	0.7068	0.7516	0.6007	0.7069	-0.0277	0.0118	0.0046	0.1061	10.378	026.70	127
11.30	0.8598	02.896	0.7252	0.7587	0.6020	0.7068	-0.0302	-0.0782	0.0062	0.1048	10.232	026.73	128
11.41	0.8788	02.903	0.7430	0.7609	0.5989	0.7034	-0.0486	-0.0142	0.0029	0.1045	10.034	026.73	129
11.44	0.8887	02.934	0.7517	0.7657	0.6014	0.7037	-0.0516	-0.0380	0.0049	0.1023	10.031	026.73	130
11.50	0.8897	03.010	0.7519	0.7670	0.6016	0.7052	-0.0447	-0.0236	0.0054	0.1036	10.278	026.70	131
11.54	0.8969	03.029	0.7587	0.7676	0.6004	0.7054	-0.0343	-0.0221	0.0051	0.1051	10.259	026.70	132
11.54	0.9202	03.017	0.7813	0.7733	0.6014	0.7079	-0.0343	-0.0368	0.0051	0.1065	09.959	026.70	133
11.54	0.9224	03.014	0.7830	0.7757	0.6034	0.7093	-0.0240	-0.0131	0.0043	0.1059	09.926	026.73	134
11.52	0.9264	03.014	0.7873	0.7763	0.6035	0.7094	-0.0239	-0.0278	0.0043	0.1059	09.885	026.73	135
11.52	0.9338	03.016	0.7940	0.7800	0.6057	0.7116	-0.0275	-0.0066	0.0045	0.1059	09.813	026.73	136
00.20	0.0607	00.047	0.0587	0.6005	0.6002	0.6567	0.0143	-0.0093	0.0007	0.0565	02.331	026.67	137
00.19	0.0413	00.025	0.0393	0.6007	0.6006	0.6561	0.0175	0.0367	-0.0007	0.0556	01.861	026.64	138

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 — MSWT TEST 89

RUN 011 MACH NO 0.803 RN/L 07497218 Q 1292 PSF TO 602 — 10/17/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
00.34	0.0251	00.024	0.0234	0.2927	0.2925	0.3008	0.0147	0.0027	0.0000	0.0083	02.896	030.28	005
00.34	0.0247	00.043	0.0230	0.2900	0.2898	0.2984	-0.0007	0.0077	-0.0014	0.0086	05.277	030.31	006
-11.05	-0.7806	-03.098	-0.7142	0.4159	0.2713	0.3063	0.0783	0.1752	-0.0007	0.0350	12.057	030.34	008
-10.86	-0.7751	-03.009	-0.7102	0.4122	0.2709	0.3053	0.0891	0.1758	-0.0019	0.0344	11.793	030.41	009
-10.68	-0.7383	-03.088	-0.6748	0.4057	0.2737	0.3070	0.0777	0.1502	-0.0013	0.0333	12.707	030.34	010
-10.49	-0.7410	-03.001	-0.6788	0.4034	0.2731	0.3051	0.0774	0.1238	0.0001	0.0321	12.306	030.38	011
-10.31	-0.7077	-03.039	-0.6476	0.3939	0.2716	0.3047	0.0802	0.1413	-0.0006	0.0331	13.045	030.44	012
-10.12	-0.6989	-02.945	-0.6381	0.3914	0.2731	0.3050	0.0716	0.1382	-0.0001	0.0319	12.836	030.34	013
-09.94	-0.6698	-02.926	-0.6121	0.3877	0.2763	0.3057	0.0708	0.1464	0.0004	0.0293	13.270	030.34	014
-09.74	-0.6600	-02.870	-0.6038	0.3831	0.2754	0.3050	0.0708	0.1385	-0.0001	0.0296	13.209	030.44	015
-09.56	-0.6602	-02.783	-0.6059	0.3777	0.2719	0.3026	0.0779	0.1561	-0.0005	0.0307	12.806	030.38	016
-09.36	-0.6117	-02.741	-0.5586	0.3723	0.2765	0.3050	0.0621	0.1112	-0.0012	0.0285	13.614	030.31	017
-09.17	-0.6161	-02.599	-0.5644	0.3699	0.2753	0.3009	0.0771	0.0707	0.0003	0.0256	12.816	030.34	018
-08.98	-0.5770	-02.578	-0.5271	0.3624	0.2760	0.3033	0.0751	0.1541	-0.0016	0.0273	13.571	030.31	019
-08.79	-0.5524	-02.587	-0.5034	0.3595	0.2784	0.3046	0.0752	0.1039	-0.0007	0.0262	14.062	030.28	020
-08.60	-0.5452	-02.517	-0.4974	0.3566	0.2782	0.3020	0.0744	0.1287	-0.0001	0.0239	14.028	030.25	021
-08.39	-0.5283	-02.513	-0.4821	0.3518	0.2777	0.3032	0.0778	0.1295	0.0001	0.0255	14.453	030.25	022
-08.21	-0.5202	-02.489	-0.4749	0.3514	0.2800	0.3045	0.0620	0.1522	-0.0014	0.0245	14.535	030.15	023
-08.03	-0.4905	-02.486	-0.4488	0.3443	0.2785	0.3018	0.0773	0.0960	-0.0000	0.0232	15.398	030.21	024
-07.85	-0.4783	-02.441	-0.4356	0.3427	0.2800	0.3027	0.0762	0.1288	0.0001	0.0227	15.507	030.25	025
-07.68	-0.4638	-02.428	-0.4222	0.3400	0.2806	0.3027	0.0754	0.1366	0.0006	0.0221	15.905	030.31	026
-07.49	-0.4476	-02.364	-0.4075	0.3339	0.2779	0.3011	0.0788	0.1201	-0.0022	0.0232	16.044	030.34	027
-07.31	-0.4369	-02.285	-0.3974	0.3354	0.2821	0.3020	0.0699	0.1509	-0.0016	0.0199	15.890	030.34	028
-07.10	-0.4175	-02.228	-0.3795	0.3301	0.2807	0.3000	0.0656	0.1075	0.0005	0.0193	16.214	030.44	029
-06.92	-0.4216	-02.086	-0.3846	0.3302	0.2815	0.2987	0.0775	0.0837	0.0008	0.0172	15.031	030.41	030
-06.76	-0.3899	-02.067	-0.3542	0.3246	0.2806	0.2991	0.0770	0.1172	-0.0011	0.0184	16.105	030.38	031
-06.58	-0.3875	-01.995	-0.3524	0.3272	0.2846	0.3015	0.0697	0.0902	0.0009	0.0168	15.642	030.34	032
-06.35	-0.3671	-01.993	-0.3338	0.3199	0.2810	0.3000	0.0808	0.1095	-0.0003	0.0190	16.497	030.31	033
-06.22	-0.3595	-01.935	-0.3269	0.3181	0.2808	0.2991	0.0691	0.1067	-0.0000	0.0184	16.351	030.28	034
-06.01	-0.3499	-01.927	-0.3186	0.3156	0.2805	0.2988	0.0692	0.0817	-0.0016	0.0183	16.735	030.31	035
-05.82	-0.3315	-01.918	-0.3013	0.3139	0.2817	0.2990	0.0885	0.0438	-0.0009	0.0173	17.573	030.38	036
-05.63	-0.3314	-01.855	-0.3020	0.3139	0.2828	0.3000	0.0729	0.0402	0.0001	0.0172	17.012	030.41	037
-05.46	-0.3152	-01.852	-0.2867	0.3138	0.2851	0.2991	0.0755	0.1072	-0.0005	0.0139	17.845	030.41	038
-05.24	-0.3178	-01.765	-0.2905	0.3128	0.2850	0.2997	0.0610	0.0706	-0.0005	0.0146	16.874	030.38	039
-05.04	-0.2896	-01.745	-0.2636	0.3079	0.2836	0.2993	0.0527	0.1025	-0.0019	0.0157	18.301	030.31	040
-04.85	-0.2979	-01.624	-0.2730	0.3068	0.2826	0.2966	0.0490	0.0669	-0.0002	0.0140	16.555	030.38	041
-04.65	-0.2773	-01.581	-0.2534	0.3052	0.2837	0.2960	0.0489	0.0583	-0.0007	0.0123	17.320	030.38	042
-04.46	-0.2644	-01.513	-0.2416	0.3032	0.2835	0.2957	0.0481	0.0822	-0.0011	0.0123	17.386	030.44	043
-04.26	-0.2619	-01.442	-0.2402	0.3017	0.2830	0.2965	0.0527	0.0329	-0.0009	0.0134	16.728	030.41	044
-04.07	-0.2545	-01.404	-0.2337	0.3026	0.2853	0.2960	0.0565	0.0334	-0.0016	0.0107	16.762	030.38	045
-03.88	-0.2393	-01.366	-0.2197	0.2984	0.2828	0.2952	0.0476	0.0982	0.0000	0.0124	17.341	030.34	046
-03.69	-0.2371	-01.294	-0.2184	0.2982	0.2836	0.2965	0.0363	0.0873	-0.0002	0.0129	16.581	030.28	047
-03.50	-0.2190	-01.265	-0.2011	0.2999	0.2871	0.2960	0.0323	0.0693	0.0005	0.0089	17.544	030.31	048
-03.31	-0.2118	-01.187	-0.1951	0.2959	0.2842	0.2947	0.0556	0.0482	-0.0005	0.0106	17.031	030.31	049
-03.12	-0.2048	-01.130	-0.1890	0.2950	0.2843	0.2943	0.0473	0.0796	-0.0009	0.0101	16.757	030.31	050
-02.92	-0.1884	-01.050	-0.1736	0.2937	0.2844	0.2945	0.0478	0.0289	0.0001	0.0101	16.926	030.31	051
-02.73	-0.1815	-00.972	-0.1679	0.2902	0.2819	0.2919	0.0471	0.0614	0.0002	0.0101	16.264	030.31	052
-02.54	-0.1734	-00.911	-0.1608	0.2897	0.2823	0.2918	0.0433	0.0433	0.0009	0.0095	15.960	030.34	053
-02.33	-0.1661	-00.831	-0.1545	0.2889	0.2824	0.2919	0.0351	0.0742	-0.0005	0.0095	15.209	030.38	054
-02.16	-0.1533	-00.787	-0.1425	0.2902	0.2846	0.2936	0.0270	0.0801	0.0005	0.0090	15.606	030.44	055
-02.00	-0.1458	-00.751	-0.1358	0.2880	0.2831	0.2916	0.0352	0.0484	0.0000	0.0085	15.655	030.41	056

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 HSWT TEST 89

RUN 011 MACH NO 0.803 RN/L 07497218 Q 1292 PSF TO 602

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COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
-01.82	-0.1374	-00.710	-0.1283	0.2895	0.2853	0.2933	0.0239	0.0290	0.0002	0.0080	15.705	030.44	057
-01.61	-0.1299	-00.672	-0.1218	0.2903	0.2868	0.2926	0.0391	0.0315	0.0013	0.0059	15.717	030.44	058
-01.42	-0.1310	-00.596	-0.1238	0.2899	0.2868	0.2926	0.0199	0.0353	0.0005	0.0059	13.824	030.44	059
-01.24	-0.1238	-00.540	-0.1176	0.2895	0.2869	0.2905	0.0355	0.0211	0.0006	0.0036	13.241	030.38	060
-01.05	-0.1225	-00.447	-0.1172	0.2861	0.2839	0.2931	0.0388	0.0711	-0.0010	0.0092	11.085	030.34	061
-00.86	-0.1104	-00.388	-0.1062	0.2855	0.2838	0.2924	0.0276	0.0433	-0.0003	0.0086	10.669	030.28	062
-00.67	-0.0985	-00.307	-0.0952	0.2819	0.2808	0.2899	0.0191	0.0738	0.0003	0.0091	09.465	030.34	063
-00.46	-0.0906	-00.248	-0.0884	0.2790	0.2783	0.2878	0.0273	0.0414	-0.0012	0.0095	08.315	030.34	064
-00.30	-0.0830	-00.170	-0.0815	0.2815	0.2810	0.2901	0.0161	0.0133	-0.0005	0.0091	06.238	030.34	065
-00.11	-0.0839	-00.095	-0.0833	0.2821	0.2819	0.2904	0.0350	0.0162	-0.0002	0.0085	03.426	030.44	066
00.07	-0.0769	-00.037	-0.0772	0.2813	0.2814	0.2911	0.0352	0.0157	-0.0001	0.0097	01.448	030.38	067
00.23	-0.0597	-00.014	-0.0609	0.2882	0.2885	0.2954	0.0277	-0.0112	0.0008	0.0069	00.699	030.38	068
00.44	-0.0383	00.010	-0.0405	0.2827	0.2830	0.2927	0.0125	-0.0474	-0.0002	0.0097	-00.766	030.38	069
00.63	-0.0479	00.102	-0.0510	0.2836	0.2841	0.2927	0.0127	-0.0570	0.0015	0.0086	-06.483	030.34	070
00.82	-0.0450	00.160	-0.0490	0.2839	0.2846	0.2936	0.0039	0.0073	-0.0009	0.0091	-10.802	030.34	071
01.01	-0.0418	00.273	-0.0469	0.2869	0.2876	0.2927	0.0149	-0.0086	0.0010	0.0051	-19.850	030.34	072
01.23	-0.0258	00.333	-0.0320	0.2858	0.2864	0.2938	0.0178	0.0162	0.0019	0.0074	-39.183	030.38	073
01.42	-0.0185	00.429	-0.0256	0.2855	0.2860	0.2940	0.0092	0.0301	0.0016	0.0080	-70.414	030.41	074
01.59	-0.0154	00.506	-0.0233	0.2860	0.2865	0.2934	0.0124	0.0467	0.0010	0.0069	-99.723	030.38	075
01.78	0.0019	00.527	-0.0071	0.2887	0.2888	0.2951	0.0127	-0.0036	0.0019	0.0064	44.418	030.41	076
01.96	0.0101	00.549	0.0002	0.2897	0.2896	0.2965	0.0047	0.0031	0.0009	0.0069	64.420	030.38	077
02.15	0.0184	00.608	0.0076	0.2882	0.2877	0.2951	0.0164	-0.0453	0.0017	0.0074	00.332	030.34	078
02.34	0.0219	00.681	0.0101	0.2886	0.2879	0.2958	0.0083	-0.0554	0.0009	0.0079	94.680	030.38	079
02.55	0.0339	00.741	0.0210	0.2889	0.2877	0.2967	-0.0080	-0.0344	0.0015	0.0090	66.524	030.38	080
02.74	0.0369	00.832	0.0229	0.2927	0.2912	0.2970	-0.0162	-0.0366	0.0011	0.0057	68.504	030.44	081
02.90	0.0489	00.909	0.0341	0.2929	0.2908	0.2955	0.0028	-0.0752	0.0020	0.0047	56.462	030.47	082
03.12	0.0600	00.988	0.0439	0.2983	0.2955	0.2991	0.0016	-0.0106	0.0011	0.0036	50.024	030.44	083
03.28	0.0675	01.052	0.0505	0.2979	0.2945	0.3004	0.0003	0.0468	-0.0002	0.0059	47.340	030.41	084
03.49	0.0890	01.075	0.0707	0.3025	0.2976	0.3028	0.0042	0.0055	0.0014	0.0052	36.722	030.38	085
03.65	0.0879	01.165	0.0690	0.2988	0.2938	0.3012	0.0003	-0.0294	0.0023	0.0074	40.245	030.41	086
03.84	0.1008	01.225	0.0807	0.3024	0.2963	0.3032	-0.0035	-0.0883	0.0027	0.0069	36.918	030.41	087
04.05	0.1132	01.249	0.0922	0.3021	0.2948	0.3033	-0.0041	-0.0642	0.0032	0.0085	33.516	030.38	088
04.23	0.1205	01.301	0.0983	0.3041	0.2960	0.3006	-0.0279	-0.0439	0.0023	0.0046	32.817	030.41	089
04.44	0.1461	01.317	0.1227	0.3073	0.2969	0.3055	-0.0254	0.0224	0.0015	0.0086	27.382	030.34	090
04.61	0.1424	01.396	0.1182	0.3062	0.2957	0.3055	-0.0053	-0.0746	0.0029	0.0097	29.787	030.31	091
04.80	0.1502	01.454	0.1248	0.3093	0.2978	0.3057	-0.0018	-0.0830	0.0038	0.0079	29.402	030.28	092
04.99	0.1662	01.454	0.1399	0.3089	0.2956	0.3051	-0.0145	-0.0187	0.0030	0.0096	26.572	030.31	093
05.16	0.1687	01.523	0.1412	0.3126	0.2987	0.3059	-0.0110	-0.0188	0.0023	0.0072	27.422	030.34	094
05.38	0.1803	01.600	0.1517	0.3125	0.2969	0.3064	-0.0118	-0.0033	0.0024	0.0095	26.965	030.38	095
05.57	0.2012	01.663	0.1714	0.3151	0.2970	0.3077	-0.0163	-0.0132	0.0038	0.0107	25.108	030.38	096
05.77	0.2047	01.733	0.1738	0.3157	0.2966	0.3079	-0.0160	-0.0795	0.0029	0.0113	25.725	030.44	097
05.96	0.2297	01.781	0.1975	0.3199	0.2977	0.3090	-0.0368	-0.0097	0.0032	0.0113	23.567	030.41	098
06.13	0.2464	01.804	0.2129	0.3255	0.3009	0.3122	-0.0177	-0.0313	0.0029	0.0113	22.234	030.41	099
06.32	0.2416	01.880	0.2070	0.3265	0.3017	0.3142	-0.0336	-0.0266	0.0026	0.0125	23.636	030.41	100
06.54	0.2542	01.925	0.2184	0.3272	0.3002	0.3144	-0.0187	-0.0080	0.0026	0.0142	23.011	030.38	101
06.73	0.2718	02.013	0.2350	0.3275	0.2977	0.3124	-0.0312	-0.0193	0.0025	0.0147	22.504	030.31	102
06.93	0.2914	02.045	0.2532	0.3327	0.2997	0.3137	-0.0315	-0.0362	0.0026	0.0140	21.319	030.34	103
07.12	0.2988	02.079	0.2596	0.3325	0.2978	0.3134	-0.0277	-0.0524	0.0029	0.0156	21.135	030.38	104
07.31	0.3153	02.142	0.2745	0.3383	0.3006	0.3151	-0.0364	-0.0218	0.0034	0.0145	20.640	030.34	105
07.53	0.3443	02.164	0.3022	0.3413	0.2988	0.3144	-0.0332	-0.0215	0.0037	0.0156	19.096	030.38	106
07.70	0.3521	02.222	0.3090	0.3424	0.2980	0.3152	-0.0298	-0.0214	0.0030	0.0173	19.177	030.38	107

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 HSWT TEST 89

RUN 011 MACH NO 0.803 RN/L 07497218 Q 1292 PSF TD 602

10/17/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
07.89	0.3683	02.260	0.3238	0.3466	0.2989	0.3173	-0.0301	-0.0466	0.0036	0.0184	18.640	030.41	108
08.08	0.3902	02.305	0.3437	0.3548	0.3029	0.3202	-0.0301	-0.0966	0.0036	0.0173	17.945	030.38	109
08.27	0.3972	02.338	0.3501	0.3530	0.2990	0.3162	-0.0495	-0.0839	0.0045	0.0172	17.882	030.41	110
08.46	0.4060	02.403	0.3574	0.3570	0.3005	0.3177	-0.0576	-0.0696	0.0041	0.0173	17.978	030.38	111
08.65	0.4355	02.409	0.3852	0.3631	0.3010	0.3199	-0.0542	-0.0528	0.0053	0.0189	16.806	030.38	112
08.87	0.4533	02.478	0.4019	0.3648	0.2984	0.3202	-0.0508	-0.0447	0.0052	0.0218	16.609	030.34	113
09.01	0.4637	02.528	0.4110	0.3685	0.2996	0.3203	-0.0547	-0.0707	0.0046	0.0207	16.565	030.28	114
09.23	0.4878	02.607	0.4336	0.3726	0.2982	0.3211	-0.0511	-0.0626	0.0044	0.0229	16.236	030.28	115
09.42	0.4988	02.622	0.4437	0.3729	0.2952	0.3197	-0.0631	-0.0318	0.0047	0.0244	15.968	030.31	116
09.56	0.5180	02.672	0.4613	0.3798	0.2979	0.3211	-0.0587	-0.0812	0.0061	0.0232	15.672	030.34	117
09.78	0.5407	02.685	0.4824	0.3846	0.2970	0.3196	-0.0706	-0.0501	0.0043	0.0226	15.087	030.41	118
09.92	0.5612	02.744	0.5010	0.3926	0.3004	0.3226	-0.0630	-0.0910	0.0054	0.0223	14.853	030.34	119
10.06	0.5758	02.778	0.5149	0.3940	0.2980	0.3219	-0.0673	-0.0507	0.0047	0.0238	14.657	030.38	120
10.20	0.5929	02.804	0.5305	0.3997	0.2994	0.3261	-0.0561	-0.0325	0.0045	0.0267	14.366	030.38	121
10.28	0.6088	02.833	0.5434	0.4039	0.3005	0.3272	-0.0488	-0.0150	0.0050	0.0267	14.184	030.34	122
10.39	0.6167	02.857	0.5520	0.4089	0.3026	0.3282	-0.0483	-0.0732	0.0056	0.0256	14.077	030.31	123
10.50	0.6333	02.858	0.5678	0.4117	0.3014	0.3275	-0.0835	-0.0709	0.0049	0.0261	13.708	030.31	124
10.58	0.6317	02.874	0.5657	0.4116	0.3007	0.3273	-0.0644	-0.0264	0.0046	0.0266	13.821	030.31	125
10.64	0.6433	02.910	0.5771	0.4123	0.2987	0.3264	-0.0760	-0.0372	0.0055	0.0277	13.742	030.34	126
10.72	0.6608	02.936	0.5938	0.4157	0.2980	0.3268	-0.0724	-0.0369	0.0057	0.0289	13.497	030.34	127
10.81	0.6680	02.953	0.5997	0.4208	0.3008	0.3285	-0.0452	-0.0321	0.0045	0.0277	13.430	030.34	128
10.95	0.6771	02.996	0.6080	0.4219	0.2988	0.3276	-0.0765	-0.0301	0.0061	0.0289	13.442	030.34	129
11.11	0.6894	03.017	0.6189	0.4257	0.2985	0.3273	-0.0572	-0.0268	0.0053	0.0289	13.297	030.34	130
11.20	0.7099	02.998	0.6386	0.4297	0.2975	0.3291	-0.0651	-0.0281	0.0058	0.0316	12.831	030.38	131
11.31	0.7206	03.012	0.6482	0.4334	0.2979	0.3278	-0.0649	-0.0365	0.0063	0.0299	12.697	030.41	132
11.34	0.7336	03.072	0.6604	0.4378	0.2994	0.3300	-0.0616	-0.0366	0.0067	0.0306	12.722	030.31	133
11.37	0.7455	03.051	0.6717	0.4411	0.3000	0.3301	-0.0577	-0.0356	0.0059	0.0300	12.435	030.34	134
11.40	0.7358	03.065	0.6626	0.4363	0.2967	0.3273	-0.0655	-0.0205	0.0054	0.0305	12.656	030.34	135
11.40	0.7357	03.127	0.6625	0.4363	0.2967	0.3277	-0.0577	-0.0039	0.0059	0.0311	12.912	030.31	136
11.40	0.7506	03.076	0.6765	0.4423	0.2999	0.3305	-0.0540	-0.0352	0.0062	0.0306	12.449	030.31	137
11.43	0.7377	03.095	0.6638	0.4395	0.2993	0.3314	-0.0649	-0.0461	0.0069	0.0321	12.746	030.38	138
00.13	0.0036	00.020	0.0029	0.2862	0.2862	0.2965	0.0031	0.0424	-0.0001	0.0103	16.909	030.28	139
00.16	0.0162	00.023	0.0154	0.2885	0.2885	0.2964	-0.0012	0.0582	-0.0013	0.0079	04.254	030.28	140

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 — HSWT TEST 89

RUN 012 MACH NO 0.606 RN/L 06972404 Q 0900 PSF TO 569 — 10/17/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
00.02	-0.0120	-00.029	-0.0121	0.2077	0.2077	0.2063	0.0111	0.0025	-0.0007	-0.0014	07.359	031.31	006
-11.38	-0.7709	-03.115	-0.7181	0.3390	0.1907	0.2166	0.0858	0.0633	-0.0054	0.0259	12.275	031.15	007
-11.04	-0.7300	-03.031	-0.6798	0.3281	0.1919	0.2146	0.0682	0.0236	-0.0044	0.0227	12.612	031.21	008
-10.66	-0.6890	-02.905	-0.6413	0.3177	0.1936	0.2131	0.0546	0.1270	-0.0041	0.0196	12.810	031.25	009
-10.29	-0.6706	-02.782	-0.6259	0.3063	0.1895	0.2132	0.0775	0.0715	-0.0035	0.0237	12.605	031.21	010
-09.92	-0.6279	-02.739	-0.5845	0.3027	0.1975	0.2190	0.0605	0.1046	-0.0023	0.0215	13.253	031.15	011
-09.55	-0.6147	-02.617	-0.5734	0.2964	0.1971	0.2167	0.0663	0.0686	-0.0027	0.0196	12.933	031.12	012
-09.22	-0.5659	-02.611	-0.5263	0.2901	0.2021	0.2182	0.0550	0.0308	-0.0042	0.0161	14.017	031.15	013
-08.82	-0.5470	-02.543	-0.5101	0.2795	0.1979	0.2170	0.0492	0.0534	-0.0030	0.0191	14.124	031.18	014
-08.45	-0.4967	-02.434	-0.4619	0.2709	0.2000	0.2150	0.0473	0.1238	-0.0028	0.0149	14.887	031.21	015
-08.08	-0.4638	-02.329	-0.4310	0.2635	0.2003	0.2130	0.0416	0.0978	-0.0031	0.0127	15.252	031.31	016
-07.72	-0.4221	-02.231	-0.3909	0.2583	0.2034	0.2139	0.0291	0.1655	-0.0022	0.0105	16.062	031.37	017
-07.34	-0.4243	-02.101	-0.3951	0.2540	0.2014	0.2143	0.0474	0.0863	-0.0019	0.0129	15.043	031.21	018
-06.99	-0.3814	-02.092	-0.3539	0.2478	0.2028	0.2153	0.0305	0.0834	-0.0030	0.0125	16.662	031.12	019
-06.64	-0.3533	-01.975	-0.3275	0.2419	0.2024	0.2098	0.0460	0.0968	-0.0039	0.0074	16.986	031.18	020
-06.29	-0.3614	-01.902	-0.3372	0.2402	0.2018	0.2119	0.0471	0.0859	-0.0032	0.0101	15.990	031.08	021
-05.92	-0.3303	-01.774	-0.3074	0.2377	0.2047	0.2108	0.0460	0.1084	-0.0016	0.0060	16.316	031.12	022
-05.57	-0.2937	-01.711	-0.2724	0.2329	0.2054	0.2105	0.0411	0.0473	-0.0027	0.0051	17.694	031.08	023
-05.16	-0.2873	-01.619	-0.2680	0.2271	0.2021	0.2081	0.0409	0.0467	-0.0026	0.0060	17.116	031.15	024
-04.77	-0.2379	-01.549	-0.2198	0.2264	0.2074	0.2103	0.0354	-0.0024	-0.0002	0.0029	19.780	031.18	025
-04.40	-0.2370	-01.483	-0.2208	0.2194	0.2018	0.2049	0.0188	0.0061	-0.0019	0.0031	19.011	031.28	026
-04.02	-0.2281	-01.413	-0.2130	0.2231	0.2077	0.2089	0.0237	0.0424	-0.0037	0.0012	18.773	031.31	027
-03.64	-0.1997	-01.267	-0.1864	0.2164	0.2041	0.2058	0.0182	0.0284	-0.0017	0.0017	19.276	031.25	028
-03.26	-0.1922	-01.110	-0.1802	0.2159	0.2053	0.2044	0.0396	0.0795	-0.0015	-0.0009	17.544	031.15	029
-02.89	-0.1752	-00.969	-0.1648	0.2105	0.2019	0.2054	0.0291	0.0283	-0.0008	0.0035	16.805	031.05	030
-02.49	-0.1574	-00.884	-0.1483	0.2138	0.2071	0.2049	0.0169	0.0968	-0.0027	-0.0022	17.049	031.05	031
-02.12	-0.1395	-00.801	-0.1319	0.2093	0.2043	0.2019	0.0329	0.1109	-0.0038	-0.0024	17.432	031.02	032
-01.78	-0.1280	-00.693	-0.1217	0.2057	0.2019	0.2006	0.0172	0.0588	-0.0034	-0.0013	16.454	031.08	033
-01.41	-0.1038	-00.556	-0.0987	0.2101	0.2076	0.2042	0.0182	-0.0383	-0.0007	-0.0035	16.279	031.12	034
-01.07	-0.0928	-00.448	-0.0889	0.2056	0.2039	0.2037	0.0065	-0.0060	0.0009	-0.0001	14.663	031.15	035
-00.68	-0.0802	-00.364	-0.0778	0.2034	0.2025	0.2009	0.0231	-0.0272	0.0005	-0.0016	13.806	031.25	036
-00.31	-0.0763	-00.204	-0.0752	0.2042	0.2038	0.1999	0.0060	0.0153	-0.0004	-0.0039	08.142	031.25	037
00.05	-0.0725	-00.042	-0.0727	0.2031	0.2032	0.2007	0.0232	-0.0306	-0.0006	-0.0025	01.779	031.21	038
00.43	-0.0448	00.101	-0.0463	0.2036	0.2040	0.2024	0.0229	-0.0206	-0.0010	-0.0016	-06.875	031.18	039
00.80	-0.0154	00.218	-0.0184	0.2085	0.2087	0.2064	0.0219	-0.0460	0.0006	-0.0023	-42.937	031.21	040
01.20	0.0009	00.279	-0.0034	0.2097	0.2097	0.2049	0.0201	0.0368	0.0002	-0.0049	10.721	031.15	041
01.54	-0.0068	00.441	-0.0125	0.2095	0.2098	0.2064	0.0090	-0.0034	0.0019	-0.0034	-96.283	031.15	042
01.92	0.0085	00.639	0.0015	0.2067	0.2065	0.2064	0.0128	0.0315	-0.0009	-0.0001	29.247	031.15	043
02.32	0.0194	00.781	0.0109	0.2086	0.2080	0.2071	-0.0044	0.0024	0.0012	-0.0009	22.624	031.15	044
02.66	0.0298	00.890	0.0200	0.2114	0.2102	0.2079	0.0004	0.0020	0.0018	-0.0023	90.661	031.21	045
03.02	0.0469	00.980	0.0357	0.2138	0.2116	0.2106	-0.0061	0.0116	0.0024	-0.0011	63.469	031.12	046
03.41	0.0652	01.047	0.0525	0.2155	0.2120	0.2107	0.0051	-0.0465	0.0011	-0.0013	48.764	031.02	047
03.75	0.0932	01.158	0.0790	0.2189	0.2133	0.2127	0.0087	0.0126	0.0024	-0.0006	37.759	031.05	048
04.12	0.1158	01.298	0.1002	0.2203	0.2125	0.2136	-0.0033	-0.0032	0.0027	0.0011	34.069	031.08	049
04.52	0.1185	01.418	0.1015	0.2194	0.2108	0.2113	-0.0151	-0.0067	0.0023	0.0006	38.362	031.25	050
04.89	0.1418	01.483	0.1233	0.2224	0.2111	0.2121	-0.0050	0.0059	0.0039	0.0010	31.780	031.31	051
05.27	0.1664	01.554	0.1456	0.2332	0.2189	0.2182	-0.0055	-0.0182	0.0026	-0.0007	28.377	031.25	052
05.65	0.2029	01.660	0.1805	0.2367	0.2178	0.2209	-0.0072	0.0277	0.0043	0.0032	24.845	031.15	053
06.00	0.2132	01.755	0.1894	0.2367	0.2156	0.2192	-0.0289	-0.0607	0.0022	0.0036	25.013	031.15	054
06.41	0.2399	01.853	0.2145	0.2388	0.2134	0.2188	-0.0126	-0.0833	0.0047	0.0055	23.436	031.28	055
06.79	0.2591	01.958	0.2315	0.2471	0.2180	0.2244	-0.0195	-0.0041	0.0036	0.0064	22.961	031.21	056

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 HSWT TEST 89

RUN 012 MACH NO 0.606 RN/L 06972404 Q 0900 PSF TO 569

10/17/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
07.16	0.2797	02.006	0.2502	0.2518	0.2187	0.2257	-0.0251	-0.0301	0.0032	0.0070	21.787	031.08	057
07.53	0.2929	02.033	0.2627	0.2477	0.2111	0.2193	-0.0306	-0.0204	0.0034	0.0081	21.090	031.12	058
07.92	0.3482	02.133	0.3150	0.2635	0.2176	0.2257	-0.0147	-0.0669	0.0030	0.0082	18.609	031.08	059
08.30	0.3697	02.298	0.3352	0.2635	0.2123	0.2223	-0.0160	-0.0224	0.0031	0.0100	18.886	031.15	060
08.71	0.4138	02.425	0.3768	0.2730	0.2128	0.2230	-0.0115	-0.0358	0.0042	0.0102	17.805	031.25	061
09.38	0.4848	02.547	0.4438	0.2885	0.2123	0.2263	-0.0520	-0.0221	0.0045	0.0139	15.959	031.08	063
09.62	0.5032	02.613	0.4607	0.2931	0.2120	0.2276	-0.0584	-0.0005	0.0041	0.0156	15.755	031.08	064
09.84	0.5228	02.619	0.4776	0.3061	0.2200	0.2298	-0.0415	-0.0103	0.0044	0.0098	15.219	031.12	065
10.03	0.5411	02.682	0.4958	0.3037	0.2127	0.2266	-0.0367	0.0131	0.0048	0.0138	15.058	031.12	066
10.19	0.5573	02.760	0.5107	0.3088	0.2135	0.2242	-0.0257	-0.0217	0.0048	0.0107	15.043	031.15	067
10.46	0.5915	02.810	0.5424	0.3204	0.2166	0.2314	-0.0598	-0.0404	0.0034	0.0148	14.430	031.12	068
10.68	0.6059	02.855	0.5552	0.3255	0.2170	0.2294	-0.0548	0.0068	0.0037	0.0124	14.316	031.15	069
10.79	0.6269	02.898	0.5756	0.3281	0.2145	0.2294	-0.0551	-0.0295	0.0044	0.0148	14.043	031.12	070
10.85	0.6481	02.891	0.5961	0.3329	0.2147	0.2295	-0.0388	-0.0030	0.0040	0.0148	13.549	031.15	071
10.88	0.6501	02.897	0.5977	0.3350	0.2162	0.2317	-0.0610	-0.0307	0.0040	0.0155	13.537	031.12	072
-00.16	-0.0246	-00.060	-0.0240	0.2124	0.2124	0.2096	0.0052	0.0500	-0.0024	-0.0027	07.430	031.05	070

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 — MSWT TEST 89

RUN 013 MACH NO 2.010 RN/L 07297436 Q 1465 PSF TD 547 — 10/17/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
30.07	0.0135	-30.065	0.0129	0.4740	0.4740	0.5473	-0.0021	-0.1020	-0.0020	0.0733	-14.719	028.59	006
-11.23	-1.2556	-03.990	-1.1407	0.7023	0.4668	0.5648	0.0832	0.0533	-0.0044	0.0980	09.653	028.59	007
-11.00	-1.2148	-03.948	-1.1037	0.6886	0.4653	0.5618	0.0835	0.0514	-0.0043	0.0966	09.873	028.59	008
-10.75	-1.1802	-03.828	-1.0725	0.6781	0.4662	0.5612	0.0784	0.0310	-0.0038	0.0949	09.853	028.56	009
-10.54	-1.1401	-03.736	-1.0356	0.6668	0.4660	0.5595	0.0793	0.0276	-0.0037	0.0935	09.954	028.56	010
-10.29	-1.1004	-03.627	-0.9998	0.6529	0.4639	0.5574	0.0769	0.0303	-0.0033	0.0935	10.013	028.56	011
-10.03	-1.0621	-03.489	-0.9650	0.6427	0.4648	0.5567	0.0789	0.0033	-0.0036	0.0919	09.979	028.52	012
-09.80	-1.0195	-03.400	-0.9259	0.6293	0.4626	0.5557	0.0798	0.0070	-0.0031	0.0932	10.131	028.49	013
-09.57	-0.9803	-03.307	-0.8893	0.6214	0.4648	0.5551	0.0755	0.0117	-0.0019	0.0902	10.250	028.49	014
-09.34	-0.9484	-03.163	-0.8611	0.6083	0.4605	0.5510	0.0786	-0.0125	-0.0028	0.0904	10.133	028.52	015
-09.09	-0.9004	-03.100	-0.8164	0.5965	0.4601	0.5507	0.0703	0.0214	-0.0027	0.0906	10.458	028.56	016
-08.86	-0.8762	-02.994	-0.7949	0.5891	0.4596	0.5487	0.0598	0.0025	-0.0015	0.0891	10.382	028.56	017
-08.64	-0.8430	-02.881	-0.7641	0.5828	0.4615	0.5495	0.0664	-0.0134	-0.0027	0.0880	10.382	028.62	018
-08.38	-0.7999	-02.805	-0.7242	0.5725	0.4608	0.5474	0.0586	-0.0090	-0.0026	0.0866	10.653	028.62	019
-08.17	-0.7798	-02.701	-0.7064	0.5668	0.4607	0.5458	0.0581	-0.0038	-0.0020	0.0851	10.522	028.62	020
-07.93	-0.7437	-02.643	-0.6731	0.5586	0.4604	0.5455	0.0607	-0.0112	-0.0022	0.0851	10.797	028.62	021
-07.71	-0.7084	-02.588	-0.6401	0.5519	0.4610	0.5460	0.0564	-0.0127	-0.0016	0.0849	11.101	028.59	022
-07.47	-0.6765	-02.515	-0.6107	0.5461	0.4621	0.5456	0.0588	-0.0056	-0.0018	0.0835	11.294	028.59	023
-07.26	-0.6525	-02.427	-0.5890	0.5400	0.4613	0.5433	0.0542	0.0075	-0.0019	0.0820	11.299	028.59	024
-07.02	-0.6191	-02.367	-0.5581	0.5336	0.4614	0.5436	0.0570	-0.0147	-0.0013	0.0822	11.615	028.62	025
-06.83	-0.5943	-02.276	-0.5352	0.5285	0.4611	0.5406	0.0493	-0.0169	-0.0017	0.0795	11.635	028.65	026
-06.59	-0.5661	-02.222	-0.5091	0.5261	0.4642	0.5420	0.0453	-0.0257	-0.0006	0.0778	11.927	028.62	027
-06.35	-0.5412	-02.132	-0.4868	0.5191	0.4621	0.5386	0.0480	-0.0407	-0.0012	0.0766	11.966	028.65	028
-06.13	-0.5142	-02.064	-0.4617	0.5169	0.4646	0.5394	0.0437	-0.0277	-0.0006	0.0748	12.193	028.59	029
-05.89	-0.4943	-01.979	-0.4438	0.5142	0.4659	0.5390	0.0498	-0.0349	-0.0005	0.0731	12.161	028.56	030
-05.66	-0.4700	-01.890	-0.4220	0.5076	0.4635	0.5380	0.0423	-0.0373	-0.0010	0.0746	12.216	028.56	031
-05.43	-0.4445	-01.832	-0.3986	0.5035	0.4635	0.5368	0.0415	-0.0380	-0.0010	0.0733	12.524	028.59	032
-05.20	-0.4243	-01.748	-0.3806	0.4993	0.4627	0.5357	0.0414	-0.0391	-0.0009	0.0729	12.519	028.52	033
-04.95	-0.4022	-01.711	-0.3607	0.4969	0.4639	0.5368	0.0413	-0.0395	-0.0009	0.0729	12.921	028.52	034
-04.69	-0.3842	-01.622	-0.3451	0.4919	0.4620	0.5351	0.0378	-0.0411	-0.0010	0.0731	12.821	028.56	035
-04.47	-0.3627	-01.550	-0.3254	0.4914	0.4646	0.5362	0.0377	-0.0419	-0.0009	0.0717	12.985	028.56	036
-04.24	-0.3406	-01.494	-0.3055	0.4856	0.4617	0.5336	0.0374	-0.0352	-0.0005	0.0718	13.327	028.59	037
-04.02	-0.3224	-01.457	-0.2890	0.4858	0.4643	0.5347	0.0373	-0.0353	-0.0013	0.0704	13.731	028.59	038
-03.78	-0.3082	-01.387	-0.2770	0.4841	0.4648	0.5352	0.0372	-0.0364	0.0005	0.0704	13.675	028.59	039
-03.55	-0.2903	-01.316	-0.2609	0.4819	0.4648	0.5340	0.0337	-0.0304	-0.0009	0.0691	13.767	028.62	040
-03.31	-0.2763	-01.228	-0.2489	0.4813	0.4661	0.5355	0.0336	-0.0313	-0.0009	0.0693	13.505	028.65	041
-03.08	-0.2633	-01.146	-0.2376	0.4824	0.4689	0.5377	0.0338	-0.0471	0.0001	0.0688	13.224	028.56	042
-02.84	-0.2417	-01.073	-0.2184	0.4758	0.4645	0.5348	0.0334	-0.0332	0.0001	0.0704	13.491	028.59	043
-02.61	-0.2247	-00.987	-0.2032	0.4763	0.4665	0.5365	0.0264	-0.0430	-0.0008	0.0700	13.337	028.52	044
-02.39	-0.2076	-00.899	-0.1879	0.4763	0.4681	0.5379	0.0328	-0.0427	-0.0004	0.0698	13.152	028.49	045
-02.17	-0.1863	-00.843	-0.1684	0.4752	0.4685	0.5381	0.0252	-0.0227	-0.0005	0.0696	13.754	028.46	046
-01.98	-0.1758	-00.772	-0.1595	0.4739	0.4681	0.5379	0.0285	-0.0376	-0.0003	0.0698	13.343	028.49	047
-01.74	-0.1652	-00.682	-0.1510	0.4689	0.4641	0.5360	0.0213	-0.0471	-0.0003	0.0718	12.545	028.59	048
-01.52	-0.1550	-00.612	-0.1425	0.4698	0.4658	0.5362	0.0212	-0.0624	-0.0012	0.0704	11.995	028.59	049
-01.28	-0.1333	-00.556	-0.1228	0.4695	0.4666	0.5370	0.0173	-0.0637	-0.0015	0.0704	12.662	028.59	050
-01.06	-0.1229	-00.467	-0.1142	0.4700	0.4678	0.5387	0.0203	-0.0711	-0.0009	0.0710	11.541	028.68	051
-00.85	-0.1169	-00.382	-0.1099	0.4703	0.4686	0.5394	0.0132	-0.0734	-0.0005	0.0708	09.917	028.65	052
-00.61	-0.0995	-00.313	-0.0946	0.4680	0.4669	0.5390	0.0162	-0.0737	-0.0012	0.0720	09.461	028.62	053
-00.39	-0.0823	-00.222	-0.0791	0.4689	0.4684	0.5402	0.0158	-0.0748	-0.0012	0.0718	08.182	028.59	054
-00.14	-0.0807	-00.103	-0.0795	0.4684	0.4682	0.5400	0.0154	-0.0617	-0.0013	0.0718	03.865	028.59	055
00.05	-0.0590	-00.047	-0.0594	0.4681	0.4681	0.5414	0.0114	-0.0484	-0.0006	0.0733	02.430	028.59	056

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 — MSWT TEST 89

RUN 013 MACH NO 2.010 RN/L 07297436 Q 1465 PSF TO 547 — 10/17/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
00.27	-0.0372	00.024	-0.0394	0.4682	0.4684	0.5415	0.0112	-0.0493	-0.0006	0.0731	-01.951	028.56	057
00.54	-0.0303	00.108	-0.0347	0.4687	0.4690	0.5404	0.0143	-0.0497	-0.0002	0.0715	-10.877	028.52	058
00.76	-0.0234	00.210	-0.0296	0.4668	0.4672	0.5401	0.0070	-0.0666	-0.0013	0.0729	-27.187	028.52	059
00.98	-0.0051	00.297	-0.0131	0.4674	0.4675	0.5405	0.0064	-0.0823	-0.0012	0.0729	-77.755	028.52	060
01.20	0.0133	00.367	0.0035	0.4676	0.4674	0.5406	0.0021	-0.0764	-0.0000	0.0731	83.488	028.56	061
01.42	0.0316	00.437	0.0199	0.4706	0.4699	0.5431	0.0047	-0.0695	-0.0002	0.0731	42.086	028.56	062
01.67	0.0424	00.505	0.0286	0.4735	0.4724	0.5443	-0.0026	-0.0644	-0.0001	0.0718	36.220	028.59	063
01.89	0.0607	00.575	0.0452	0.4725	0.4708	0.5443	-0.0032	-0.0725	-0.0004	0.0735	28.773	028.62	064
02.13	0.0713	00.660	0.0537	0.4733	0.4709	0.5444	-0.0073	-0.0668	-0.0010	0.0735	28.137	028.62	065
02.35	0.0936	00.732	0.0741	0.4757	0.4723	0.5441	-0.0046	-0.0817	-0.0007	0.0718	23.756	028.59	066
02.57	0.1042	00.818	0.0829	0.4777	0.4735	0.5451	-0.0054	-0.0684	0.0003	0.0717	23.848	028.56	067
02.79	0.1185	00.904	0.0953	0.4792	0.4740	0.5456	-0.0062	-0.0621	0.0000	0.0717	23.178	028.56	068
03.03	0.1369	00.957	0.1116	0.4805	0.4739	0.5458	-0.0069	-0.0557	0.0005	0.0718	21.241	028.59	069
03.25	0.1593	01.029	0.1323	0.4805	0.4722	0.5454	-0.0110	-0.0716	0.0004	0.0731	19.620	028.56	070
03.49	0.1699	01.096	0.1409	0.4812	0.4717	0.5450	-0.0081	-0.0719	0.0007	0.0733	19.598	028.59	071
03.70	0.1847	01.167	0.1536	0.4857	0.4747	0.5478	-0.0190	-0.0602	0.0001	0.0731	19.199	028.56	072
03.95	0.1991	01.252	0.1660	0.4867	0.4741	0.5488	-0.0195	-0.0760	0.0011	0.0748	19.103	028.59	073
04.14	0.2247	01.306	0.1898	0.4895	0.4746	0.5480	-0.0170	-0.0688	0.0009	0.0735	17.655	028.62	074
04.38	0.2468	01.377	0.2098	0.4927	0.4752	0.5487	-0.0211	-0.0703	0.0008	0.0735	16.944	028.62	075
04.63	0.2688	01.464	0.2293	0.4990	0.4788	0.5523	-0.0217	-0.0792	0.0022	0.0735	16.547	028.62	076
04.86	0.2873	01.536	0.2459	0.5001	0.4774	0.5522	-0.0192	-0.0721	0.0012	0.0748	16.242	028.59	077
05.05	0.3055	01.606	0.2622	0.5034	0.4783	0.5531	-0.0199	-0.0660	0.0026	0.0748	15.974	028.59	078
05.31	0.3357	01.664	0.2899	0.5093	0.4803	0.5548	-0.0242	-0.0674	0.0015	0.0746	15.059	028.56	079
05.53	0.3575	01.717	0.3095	0.5128	0.4805	0.5553	-0.0215	-0.0604	0.0022	0.0748	14.589	028.59	080
05.76	0.3716	01.801	0.3217	0.5134	0.4785	0.5549	-0.0255	-0.0693	0.0026	0.0764	14.723	028.62	081
06.01	0.4010	01.857	0.3483	0.5222	0.4829	0.5593	-0.0263	-0.0632	0.0030	0.0764	14.070	028.62	082
06.23	0.4109	01.944	0.3563	0.5217	0.4800	0.5578	-0.0268	-0.0638	0.0032	0.0778	14.371	028.62	083
06.49	0.4405	02.003	0.3834	0.5268	0.4801	0.5592	-0.0271	-0.0788	0.0034	0.0791	13.815	028.59	084
06.72	0.4690	02.094	0.4097	0.5311	0.4796	0.5587	-0.0311	-0.0656	0.0033	0.0791	13.562	028.59	085
06.94	0.4975	02.148	0.4358	0.5365	0.4799	0.5592	-0.0348	-0.0666	0.0032	0.0793	13.120	028.62	086
07.20	0.5218	02.219	0.4578	0.5400	0.4784	0.5593	-0.0283	-0.0662	0.0047	0.0809	12.919	028.65	087
07.45	0.5421	02.322	0.4754	0.5455	0.4793	0.5589	-0.0320	-0.0746	0.0034	0.0797	13.010	028.68	088
07.66	0.5786	02.397	0.5094	0.5535	0.4807	0.5618	-0.0391	-0.0841	0.0044	0.0811	12.584	028.68	089
07.91	0.6081	02.473	0.5366	0.5566	0.4775	0.5599	-0.0464	-0.0929	0.0047	0.0824	12.355	028.65	090
08.14	0.6357	02.577	0.5611	0.5662	0.4810	0.5650	-0.0432	-0.0865	0.0046	0.0840	12.317	028.68	091
08.38	0.6806	02.663	0.6033	0.5755	0.4815	0.5666	-0.0371	-0.0717	0.0052	0.0851	11.874	028.62	092
08.60	0.7060	02.753	0.6261	0.5817	0.4815	0.5665	-0.0374	-0.0731	0.0062	0.0849	11.845	028.59	093
08.86	0.7365	02.816	0.6534	0.5903	0.4826	0.5687	-0.0443	-0.0827	0.0063	0.0860	11.617	028.52	094
09.09	0.7656	02.927	0.6797	0.5976	0.4827	0.5700	-0.0440	-0.1066	0.0059	0.0873	11.614	028.49	095
09.29	0.7956	03.012	0.7075	0.6033	0.4812	0.5689	-0.0441	-0.0862	0.0055	0.0877	11.500	028.56	096
09.52	0.8308	03.121	0.7395	0.6137	0.4828	0.5720	-0.0509	-0.0681	0.0064	0.0891	11.411	028.56	097
09.67	0.8636	03.178	0.7702	0.6213	0.4830	0.5722	-0.0509	-0.0765	0.0068	0.0891	11.181	028.56	098
09.84	0.8954	03.216	0.7994	0.6302	0.4842	0.5735	-0.0546	-0.0635	0.0075	0.0893	10.912	028.59	099
10.02	0.9208	03.326	0.8222	0.6388	0.4860	0.5751	-0.0507	-0.0867	0.0064	0.0891	10.972	028.56	100
10.17	0.9607	03.385	0.8599	0.6475	0.4855	0.5761	-0.0477	-0.0656	0.0071	0.0906	10.705	028.56	101
10.29	0.9776	03.419	0.8751	0.6530	0.4862	0.5770	-0.0441	-0.0730	0.0069	0.0907	10.625	028.59	102
10.38	0.9905	03.485	0.8869	0.6553	0.4848	0.5758	-0.0437	-0.0960	0.0073	0.0909	10.689	028.62	103
10.60	1.0151	03.542	0.9089	0.6618	0.4833	0.5756	-0.0406	-0.0745	0.0070	0.0924	10.599	028.62	104
10.78	1.0350	03.680	0.9262	0.6692	0.4841	0.5765	-0.0505	-0.0646	0.0070	0.0924	10.802	028.62	105
10.99	1.0704	03.789	0.9582	0.6809	0.4858	0.5796	-0.0572	-0.0609	0.0068	0.0938	10.753	028.62	106
11.20	1.1141	03.849	0.9987	0.6919	0.4848	0.5801	-0.0540	-0.0615	0.0077	0.0953	10.496	028.62	107

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 HSWT TEST 89

RUN 013 MACH NO 2.010 RN/L 07297436 Q 1465 PSF TO 547

10/17/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
11.32	1.1311	03.953	1.0134	0.6998	0.4873	0.5811	-0.0535	-0.0780	0.0067	0.0938	10.618	028.62	108
11.44	1.1644	03.977	1.0446	0.7090	0.4877	0.5815	-0.0467	-0.0991	0.0075	0.0938	10.376	028.62	109
11.48	1.1961	04.013	1.0744	0.7196	0.4913	0.5853	-0.0466	-0.0931	0.0077	0.0940	10.193	028.65	110
11.52	1.1999	04.085	1.0778	0.7200	0.4903	0.5841	-0.0530	-0.0804	0.0074	0.0938	10.344	028.62	111
11.56	1.2275	04.096	1.1043	0.7264	0.4904	0.5841	-0.0504	-0.0804	0.0065	0.0937	10.137	028.59	112
11.59	1.2296	04.109	1.1060	0.7279	0.4909	0.5848	-0.0466	-0.0948	0.0075	0.0938	10.151	028.62	113
00.06	0.0542	-00.039	0.0537	0.4762	0.4761	0.5494	-0.0029	-0.0808	-0.0025	0.0733	-02.214	028.59	114

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 — HSWT TEST 89

RUN 014 MACH NO 2.010 RN/L 06813357 Q 1467 PSF TO 575 — 10/17/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
00.11	0.0495	-00.192	0.0483	0.5964	0.5963	0.7060	0.0160	-0.1218	-0.0019	0.1096	-11.767	028.59	006
-11.58	-2.0147	01.245	-1.8579	0.9698	0.5773	0.7030	0.0347	-0.1348	-0.0180	0.1258	-01.877	028.62	007
-11.61	-2.0392	01.257	-1.8812	0.9766	0.5781	0.7023	0.0387	-0.1778	-0.0177	0.1242	-01.873	028.59	008
-11.63	-2.0483	01.270	-1.8902	0.9764	0.5751	0.7009	0.0426	-0.1988	-0.0196	0.1258	-01.884	028.62	009
-11.61	-2.0479	01.253	-1.8899	0.9770	0.5766	0.7024	0.0530	-0.2115	-0.0182	0.1258	-01.859	028.62	010
-11.53	-2.0232	01.224	-1.8671	0.9695	0.5767	0.7011	0.0488	-0.1753	-0.0180	0.1244	-01.838	028.65	011
-11.40	-2.0070	01.230	-1.8532	0.9631	0.5779	0.7022	0.0483	-0.1539	-0.0176	0.1243	-01.862	028.62	012
-11.23	-1.9770	01.267	-1.8269	0.9504	0.5765	0.7010	0.0442	-0.1258	-0.0169	0.1246	-01.947	028.68	013
-11.01	-1.9398	01.309	-1.7943	0.9348	0.5750	0.6996	0.0401	-0.1267	-0.0153	0.1246	-02.049	028.68	014
-10.81	-1.9063	01.353	-1.7641	0.9253	0.5779	0.7022	0.0439	-0.1995	-0.0150	0.1243	-02.156	028.62	015
-10.59	-1.8503	01.365	-1.7127	0.9080	0.5778	0.7021	0.0500	-0.1913	-0.0151	0.1243	-02.242	028.62	016
-10.36	-1.7849	01.349	-1.6515	0.8909	0.5793	0.7020	0.0493	-0.1768	-0.0169	0.1227	-02.296	028.59	017
-10.11	-1.7462	01.410	-1.6177	0.8751	0.5775	0.7015	0.0519	-0.1625	-0.0149	0.1240	-02.453	028.56	018
-09.89	-1.6858	01.457	-1.5624	0.8599	0.5789	0.7015	0.0339	-0.1297	-0.0164	0.1226	-02.625	028.56	019
-09.66	-1.6208	01.470	-1.5006	0.8431	0.5793	0.7020	0.0297	-0.1451	-0.0140	0.1227	-02.755	028.59	020
-09.44	-1.5817	01.477	-1.4655	0.8290	0.5773	0.7002	0.0360	-0.1438	-0.0144	0.1229	-02.837	028.62	021
-09.22	-1.5096	01.426	-1.3974	0.8125	0.5780	0.7008	0.0388	-0.1573	-0.0143	0.1229	-02.870	028.62	022
-08.98	-1.4761	01.434	-1.3672	0.8047	0.5813	0.7027	0.0348	-0.1365	-0.0133	0.1214	-02.951	028.62	023
-08.77	-1.4230	01.412	-1.3179	0.7908	0.5807	0.7021	0.0343	-0.1580	-0.0129	0.1214	-03.015	028.62	024
-08.52	-1.3848	01.425	-1.2831	0.7816	0.5828	0.7025	0.0337	-0.1585	-0.0112	0.1197	-03.126	028.56	025
-08.31	-1.3186	01.371	-1.2204	0.7681	0.5837	0.7035	0.0332	-0.1725	-0.0114	0.1198	-03.158	028.59	026
-08.09	-1.2849	01.362	-1.1898	0.7595	0.5844	0.7043	0.0288	-0.1369	-0.0095	0.1198	-03.221	028.59	027
-07.86	-1.2372	01.342	-1.1456	0.7483	0.5847	0.7044	0.0248	-0.1374	-0.0098	0.1197	-03.294	028.56	028
-07.65	-1.1866	01.301	-1.0979	0.7395	0.5868	0.7066	0.0277	-0.1294	-0.0093	0.1198	-03.331	028.59	029
-07.42	-1.1485	01.276	-1.0631	0.7302	0.5868	0.7051	0.0307	-0.1502	-0.0087	0.1184	-03.376	028.59	030
-07.22	-1.1147	01.268	-1.0323	0.7212	0.5858	0.7056	0.0267	-0.1363	-0.0081	0.1198	-03.454	028.59	031
-06.98	-1.0568	01.229	-0.9777	0.7105	0.5863	0.7048	0.0258	-0.1213	-0.0076	0.1185	-03.533	028.62	032
-06.78	-1.0266	01.219	-0.9500	0.7049	0.5878	0.7048	0.0221	-0.1291	-0.0072	0.1170	-03.608	028.62	033
-06.58	-0.9859	01.180	-0.9121	0.6970	0.5880	0.7049	0.0249	-0.1282	-0.0062	0.1169	-03.636	028.59	034
-06.35	-0.9380	01.137	-0.8672	0.6882	0.5882	0.7039	0.0280	-0.1560	-0.0061	0.1157	-03.684	028.65	035
-06.09	-0.9092	01.129	-0.8417	0.6838	0.5876	0.7032	0.0204	-0.1282	-0.0057	0.1156	-03.774	028.62	036
-05.91	-0.8503	01.062	-0.7850	0.6744	0.5900	0.7053	0.0232	-0.1273	-0.0057	0.1153	-03.794	028.56	037
-05.69	-0.8226	01.017	-0.7599	0.6694	0.5907	0.7047	0.0229	-0.1267	-0.0058	0.1140	-03.755	028.59	038
-05.47	-0.7798	00.975	-0.7200	0.6621	0.5905	0.7032	0.0153	-0.1201	-0.0050	0.1127	-03.799	028.62	039
-05.25	-0.7474	00.935	-0.6899	0.6589	0.5930	0.7054	0.0218	-0.1188	-0.0047	0.1124	-03.801	028.56	040
-05.03	-0.7160	00.891	-0.6614	0.6514	0.5908	0.7034	0.0213	-0.1182	-0.0048	0.1125	-03.780	028.59	041
-04.79	-0.6732	00.816	-0.6215	0.6448	0.5907	0.7019	0.0172	-0.1106	-0.0048	0.1112	-03.683	028.62	042
-04.58	-0.6496	00.787	-0.6005	0.6396	0.5896	0.7010	0.0135	-0.1108	-0.0050	0.1114	-03.682	028.65	043
-04.33	-0.6102	00.728	-0.5639	0.6345	0.5901	0.7018	0.0095	-0.0964	-0.0046	0.1117	-03.623	028.72	044
-04.11	-0.5839	00.701	-0.5401	0.6291	0.5888	0.7004	0.0193	-0.0942	-0.0040	0.1117	-03.646	028.72	045
-03.90	-0.5354	00.613	-0.4938	0.6285	0.5935	0.7034	0.0086	-0.0954	-0.0049	0.1099	-03.481	028.65	046
-03.69	-0.4971	00.555	-0.4578	0.6247	0.5940	0.7024	0.0081	-0.1020	-0.0037	0.1085	-03.395	028.65	047
-03.45	-0.4705	00.528	-0.4339	0.6211	0.5938	0.7023	0.0112	-0.1084	-0.0031	0.1085	-03.411	028.65	048
-03.22	-0.4469	00.499	-0.4131	0.6144	0.5903	0.6990	0.0141	-0.0999	-0.0034	0.1088	-03.394	028.72	049
-03.03	-0.3969	00.427	-0.3651	0.6124	0.5923	0.6997	0.0136	-0.1065	-0.0031	0.1075	-03.266	028.75	050
-02.79	-0.3628	00.368	-0.3335	0.6098	0.5928	0.7003	0.0132	-0.0987	-0.0037	0.1075	-03.083	028.75	051
-02.58	-0.3324	00.309	-0.3052	0.6086	0.5942	0.7015	-0.0008	-0.0865	-0.0030	0.1073	-02.825	028.72	052
-02.35	-0.3058	00.266	-0.2812	0.6080	0.5959	0.7029	0.0061	-0.1001	-0.0019	0.1070	-02.637	028.65	053
-02.14	-0.2791	00.222	-0.2567	0.6055	0.5955	0.7024	0.0059	-0.0929	-0.0017	0.1069	-02.413	028.62	054
-01.96	-0.2520	00.161	-0.2316	0.6012	0.5929	0.7012	0.0197	-0.1047	-0.0028	0.1083	-01.937	028.62	055
-01.73	-0.2173	00.102	-0.1993	0.6005	0.5942	0.7024	0.0231	-0.1115	-0.0024	0.1082	-01.420	028.59	056

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 — HSWT TEST 89

RUN 014 MACH NO 2.010 RN/L 06813357 Q 1467 PSF TO 575 — 10/17/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
-01.52	-0.1829	00.059	-0.1670	0.6003	0.5957	0.7037	0.0231	-0.1117	-0.0026	0.1080	-00.981	028.56	057
-01.29	-0.1562	00.032	-0.1429	0.5970	0.5936	0.7030	0.0229	-0.0975	-0.0027	0.1093	-00.615	028.52	058
-01.08	-0.1370	00.019	-0.1258	0.5966	0.5941	0.7033	0.0265	-0.1046	-0.0022	0.1092	-00.422	028.49	059
-00.85	-0.1174	00.006	-0.1086	0.5948	0.5931	0.7009	0.0266	-0.1267	-0.0018	0.1077	-00.163	028.49	060
-00.64	-0.0747	-00.051	-0.0680	0.5935	0.5927	0.7019	0.0299	-0.1261	-0.0018	0.1092	02.094	028.49	061
-00.43	-0.0475	-00.079	-0.0430	0.5933	0.5930	0.7036	0.0265	-0.1199	-0.0017	0.1107	05.052	028.49	062
-00.23	-0.0201	-00.123	-0.0177	0.5915	0.5914	0.7024	0.0193	-0.0991	-0.0010	0.1109	18.585	028.56	063
00.00	-0.0047	-00.136	-0.0047	0.5930	0.5930	0.7027	0.0091	-0.0796	-0.0022	0.1096	88.532	028.59	064
00.18	0.0339	-00.194	0.0321	0.5914	0.5913	0.7014	0.0190	-0.0843	-0.0012	0.1101	-17.366	028.68	065
00.44	0.0491	-00.207	0.0445	0.5897	0.5893	0.6998	0.0154	-0.0846	-0.0014	0.1105	-12.847	028.78	066
00.65	0.0874	-00.266	0.0807	0.5911	0.5902	0.7007	0.0151	-0.0841	-0.0014	0.1105	-09.245	028.78	067
00.86	0.1103	-00.295	0.1014	0.5939	0.5923	0.7015	0.0149	-0.0839	-0.0006	0.1092	-08.112	028.81	068
01.07	0.1297	-00.324	0.1187	0.5941	0.5918	0.7010	0.0045	-0.0925	0.0001	0.1092	-07.591	028.81	069
01.28	0.1605	-00.368	0.1473	0.5955	0.5920	0.7012	0.0112	-0.1127	0.0009	0.1092	-06.966	028.81	070
01.52	0.1955	-00.429	0.1797	0.5996	0.5946	0.7035	0.0177	-0.1111	0.0005	0.1089	-06.659	028.75	071
01.75	0.2382	-00.487	0.2198	0.6028	0.5958	0.7044	0.0138	-0.1043	0.0015	0.1086	-06.218	028.68	072
01.94	0.2659	-00.533	0.2456	0.6035	0.5949	0.7047	0.0170	-0.1177	0.0009	0.1098	-06.095	028.62	073
02.20	0.3009	-00.577	0.2778	0.6070	0.5959	0.7041	0.0201	-0.1242	0.0024	0.1082	-05.831	028.59	074
02.38	0.3169	-00.609	0.2918	0.6092	0.5966	0.7046	0.0200	-0.1310	0.0011	0.1080	-05.837	028.56	075
02.61	0.3641	-00.685	0.3366	0.6124	0.5964	0.7042	0.0228	-0.1298	0.0013	0.1077	-05.711	028.49	076
02.84	0.3951	-00.729	0.3650	0.6156	0.5967	0.7045	0.0193	-0.1228	0.0015	0.1077	-05.604	028.49	077
03.05	0.4177	-00.757	0.3854	0.6172	0.5958	0.7037	0.0255	-0.1213	0.0019	0.1079	-05.506	028.52	078
03.25	0.4485	-00.817	0.4139	0.6198	0.5954	0.7034	0.0252	-0.1277	0.0015	0.1080	-05.534	028.56	079
03.48	0.4834	-00.877	0.4461	0.6258	0.5975	0.7056	0.0214	-0.1208	0.0025	0.1080	-05.511	028.56	080
03.69	0.5137	-00.920	0.4743	0.6274	0.5955	0.7052	0.0210	-0.1203	0.0025	0.1096	-05.440	028.59	081
03.89	0.5449	-00.981	0.5032	0.6316	0.5960	0.7056	0.0208	-0.1269	0.0020	0.1096	-05.467	028.59	082
04.13	0.5873	-01.039	0.5428	0.6378	0.5971	0.7081	0.0169	-0.1200	0.0022	0.1111	-05.374	028.59	083
04.39	0.6167	-01.081	0.5692	0.6423	0.5969	0.7083	0.0200	-0.1190	0.0032	0.1114	-05.323	028.65	084
04.55	0.6517	-01.140	0.6023	0.6460	0.5962	0.7091	0.0198	-0.1331	0.0040	0.1128	-05.316	028.65	085
04.76	0.6986	-01.215	0.6468	0.6516	0.5956	0.7097	0.0191	-0.1180	0.0040	0.1141	-05.285	028.62	086
04.98	0.7247	-01.259	0.6702	0.6572	0.5966	0.7096	0.0186	-0.1029	0.0031	0.1128	-05.276	028.65	087
05.19	0.7601	-01.303	0.7029	0.6644	0.5981	0.7108	0.0113	-0.0966	0.0030	0.1127	-05.208	028.62	088
05.43	0.8024	-01.361	0.7421	0.6725	0.5992	0.7133	0.0143	-0.0957	0.0032	0.1141	-05.154	028.62	089
05.67	0.8303	-01.391	0.7671	0.6775	0.5983	0.7123	0.0105	-0.1033	0.0034	0.1140	-05.090	028.59	090
05.89	0.8696	-01.434	0.8034	0.6859	0.5998	0.7136	0.0100	-0.1104	0.0038	0.1139	-05.011	028.56	091
06.11	0.9106	-01.473	0.8418	0.6914	0.5979	0.7119	0.0128	-0.1166	0.0044	0.1140	-04.915	028.59	092
06.33	0.9527	-01.530	0.8809	0.7003	0.5990	0.7130	0.0088	-0.1022	0.0041	0.1140	-04.879	028.59	093
06.54	0.9986	-01.586	0.9239	0.7085	0.5987	0.7141	0.0116	-0.1012	0.0042	0.1155	-04.825	028.59	094
06.78	1.0356	-01.625	0.9577	0.7162	0.5981	0.7122	0.0109	-0.0934	0.0046	0.1141	-04.768	028.62	095
07.00	1.0785	-01.651	0.9975	0.7252	0.5981	0.7136	0.0103	-0.1006	0.0041	0.1155	-04.650	028.59	096
07.24	1.1180	-01.704	1.0337	0.7336	0.5974	0.7146	0.0062	-0.0790	0.0042	0.1172	-04.629	028.65	097
07.46	1.1697	-01.746	1.0818	0.7474	0.6006	0.7160	0.0052	-0.0568	0.0028	0.1155	-04.534	028.59	098
07.71	1.1970	-01.725	1.1056	0.7558	0.6006	0.7160	0.0013	-0.0725	0.0043	0.1153	-04.377	028.56	099
07.93	1.2466	-01.763	1.1519	0.7663	0.6001	0.7154	-0.0030	-0.0727	0.0041	0.1153	-04.298	028.56	100
08.15	1.2807	-01.750	1.1833	0.7714	0.5958	0.7129	-0.0076	-0.0369	0.0034	0.1170	-04.152	028.62	101
08.40	1.3277	-01.775	1.2262	0.7848	0.5972	0.7141	-0.0048	-0.0508	0.0035	0.1169	-04.062	028.59	102
08.62	1.3721	-01.813	1.2669	0.7974	0.5986	0.7157	-0.0017	-0.0716	0.0023	0.1170	-04.014	028.62	103
08.84	1.4125	-01.808	1.3036	0.8091	0.5992	0.7160	-0.0096	-0.0585	0.0018	0.1168	-03.888	028.56	104
09.01	1.4624	-01.825	1.3509	0.8186	0.5970	0.7140	-0.0173	-0.0666	0.0018	0.1170	-03.792	028.62	105
09.20	1.4883	-01.819	1.3737	0.8274	0.5972	0.7157	-0.0144	-0.0591	0.0015	0.1185	-03.713	028.62	106
09.37	1.5354	-01.839	1.4179	0.8383	0.5964	0.7150	-0.0156	-0.0298	0.0005	0.1186	-03.638	028.65	107

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89

HSWT TEST 89

RUN 014 MACH NO 2.010 RN/L 06813357 Q 1467 PSF TO 575

10/17/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
09.53	1.5808	-01.862	1.4597	0.8525	0.5990	0.7162	-0.0163	-0.0297	-0.0004	0.1172	-03.578	028.65	108
09.70	1.6199	-01.888	1.4955	0.8656	0.6012	0.7183	-0.0136	-0.0001	-0.0021	0.1170	-03.541	028.62	109
09.84	1.6458	-01.882	1.5188	0.8742	0.6018	0.7189	-0.0177	0.0209	-0.0027	0.1170	-03.473	028.62	110
09.95	1.6762	-01.875	1.5473	0.8809	0.6002	0.7173	-0.0147	-0.0148	-0.0012	0.1170	-03.398	028.62	111
10.09	1.6943	-01.859	1.5631	0.8867	0.5991	0.7173	-0.0258	0.0196	-0.0023	0.1182	-03.333	028.56	112
10.26	1.7290	-01.814	1.5944	0.8985	0.6001	0.7170	-0.0233	0.0268	-0.0034	0.1169	-03.188	028.59	113
10.46	1.7677	-01.786	1.6298	0.9092	0.5982	0.7167	-0.0276	0.0329	-0.0041	0.1185	-03.070	028.62	114
10.66	1.8137	-01.756	1.6719	0.9222	0.5969	0.7155	-0.0394	0.0741	-0.0039	0.1186	-02.941	028.65	115
10.84	1.8710	-01.741	1.7251	0.9391	0.5978	0.7165	-0.0303	0.0828	-0.0055	0.1188	-02.826	028.68	116
10.96	1.9199	-01.713	1.7711	0.9534	0.5999	0.7186	-0.0308	0.0312	-0.0043	0.1188	-02.711	028.68	117
11.03	1.9453	-01.703	1.7947	0.9602	0.5989	0.7180	-0.0315	0.0453	-0.0035	0.1190	-02.659	028.75	118
11.04	1.9406	-01.654	1.7901	0.9590	0.5985	0.7175	-0.0282	0.0454	-0.0050	0.1190	-02.589	028.75	119
11.10	1.9692	-01.638	1.8165	0.9697	0.6017	0.7204	-0.0321	0.0446	-0.0061	0.1186	-02.526	028.65	120
00.07	0.0563	-00.157	0.0556	0.5933	0.5933	0.7042	0.0226	-0.1136	-0.0018	0.1109	-08.449	028.56	121

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 — HSWT TEST 89

RUN 015 MACH NO 2.010 RN/L 07040708 Q 1463 PSF TO 561 — 10/17/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
00.18	0.0446	-00.204	0.0427	0.6060	0.6059	0.7167	0.0129	-0.1161	0.1927	0.1108	-13.864	028.52	006
-11.19	-1.9747	01.359	-1.8231	0.9598	0.5877	0.7116	0.0286	-0.0359	0.1911	0.1239	-02.090	028.52	009
-10.82	-1.8877	01.411	-1.7433	0.9343	0.5903	0.7128	0.0212	-0.0672	0.1924	0.1225	-02.271	028.52	008
-10.38	-1.8068	01.452	-1.6708	0.9060	0.5900	0.7111	0.0306	-0.0877	0.1915	0.1211	-02.442	028.56	009
-09.91	-1.6937	01.486	-1.5665	0.8752	0.5925	0.7136	0.0224	-0.0678	0.1932	0.1211	-02.665	028.56	010
-09.47	-1.5955	01.507	-1.4760	0.8481	0.5937	0.7134	0.0285	-0.1106	0.1928	0.1197	-02.870	028.56	011
-08.98	-1.5049	01.511	-1.3940	0.8196	0.5918	0.7115	0.0307	-0.1100	0.1929	0.1197	-03.049	028.56	012
-08.55	-1.4010	01.473	-1.2972	0.7947	0.5930	0.7128	0.0229	-0.1256	0.1913	0.1198	-03.194	028.59	013
-08.12	-1.3099	01.468	-1.2127	0.7745	0.5956	0.7139	0.0223	-0.1620	0.1916	0.1184	-03.434	028.59	014
-07.67	-1.2130	01.405	-1.1194	0.7536	0.5975	0.7160	0.0276	-0.1169	0.1933	0.1185	-03.527	028.62	015
-07.23	-1.1188	01.375	-1.0346	0.7350	0.5990	0.7160	0.0333	-0.1156	0.1962	0.1170	-03.732	028.62	016
-06.80	-1.0359	01.308	-0.9575	0.7194	0.6011	0.7190	0.0431	-0.1500	0.1962	0.1179	-03.836	028.49	017
-06.37	-0.9577	01.220	-0.8850	0.7047	0.6023	0.7170	0.0387	-0.1644	0.1945	0.1148	-03.869	028.43	018
-05.96	-0.8932	01.152	-0.8259	0.6916	0.6021	0.7167	0.0311	-0.1796	0.1941	0.1146	-03.917	028.39	019
-05.50	-0.8228	01.040	-0.7613	0.6780	0.6019	0.7137	0.0266	-0.1714	0.1930	0.1118	-03.840	028.43	020
-05.06	-0.7392	00.978	-0.6834	0.6624	0.5996	0.7120	0.0186	-0.1569	0.1924	0.1124	-04.020	028.56	021
-04.57	-0.6601	00.883	-0.6102	0.6515	0.6008	0.7122	0.0212	-0.1625	0.1930	0.1114	-04.065	028.65	022
-04.14	-0.5941	00.772	-0.5492	0.6421	0.6008	0.7123	0.0204	-0.1613	0.1933	0.1115	-03.947	028.68	023
-03.71	-0.5317	00.668	-0.4917	0.6335	0.6003	0.7106	0.0196	-0.1672	0.1951	0.1102	-03.816	028.72	024
-03.27	-0.4665	00.541	-0.4313	0.6283	0.6027	0.7114	0.0360	-0.1847	0.1945	0.1088	-03.524	028.72	025
-02.82	-0.4033	00.453	-0.3731	0.6229	0.6038	0.7120	0.0353	-0.1989	0.1943	0.1082	-03.386	028.59	026
-02.40	-0.3388	00.356	-0.3133	0.6157	0.6020	0.7113	0.0348	-0.1982	0.1937	0.1093	-03.188	028.52	027
-01.98	-0.2664	00.270	-0.2455	0.6109	0.6021	0.7111	0.0484	-0.2024	0.1935	0.1091	-03.084	028.46	028
-01.56	-0.2122	00.189	-0.1957	0.6064	0.6008	0.7099	0.0448	-0.1947	0.1927	0.1091	-02.705	028.46	029
-01.10	-0.1538	00.091	-0.1422	0.6031	0.6003	0.7095	0.0412	-0.1867	0.1916	0.1092	-01.802	028.49	030
-00.67	-0.1030	00.001	-0.0960	0.6014	0.6003	0.7112	0.0274	-0.1662	0.1905	0.1109	-00.020	028.56	031
-00.26	-0.0443	-00.088	-0.0416	0.6028	0.6026	0.7135	0.0343	-0.1643	0.1917	0.1109	06.058	028.56	032
00.18	0.0176	-00.168	0.0157	0.6027	0.6026	0.7134	0.0339	-0.1489	0.1919	0.1108	-28.951	028.52	033
00.60	0.0827	-00.254	0.0764	0.6038	0.6030	0.7122	0.0293	-0.1263	0.1931	0.1092	-09.323	028.49	034
01.04	0.1404	-00.358	0.1294	0.6049	0.6025	0.7118	0.0284	-0.1246	0.1928	0.1093	-07.738	028.52	035
01.49	0.1979	-00.437	0.1822	0.6063	0.6014	0.7122	0.0171	-0.1106	0.1939	0.1108	-06.702	028.52	036
01.90	0.2476	-00.524	0.2275	0.6090	0.6012	0.7108	0.0060	-0.0962	0.1953	0.1096	-06.435	028.59	037
02.32	0.3050	-00.612	0.2803	0.6135	0.6017	0.7099	0.0015	-0.0809	0.1959	0.1082	-06.092	028.59	038
02.79	0.3700	-00.706	0.3403	0.6198	0.6026	0.7122	0.0178	-0.0839	0.1973	0.1096	-05.793	028.59	039
03.22	0.4203	-00.795	0.3858	0.6260	0.6034	0.7114	0.0169	-0.0824	0.1975	0.1080	-05.747	028.56	040
03.61	0.4888	-00.887	0.4500	0.6317	0.6021	0.7132	0.0091	-0.0897	0.1971	0.1111	-05.515	028.59	041
04.05	0.5551	-00.983	0.5109	0.6440	0.6063	0.7171	0.0116	-0.0953	0.1972	0.1108	-05.383	028.52	042
04.52	0.6180	-01.081	0.5684	0.6521	0.6054	0.7173	0.0107	-0.1085	0.1976	0.1120	-05.313	028.46	043
04.92	0.6847	-01.179	0.6305	0.6590	0.6025	0.7164	0.0164	-0.0984	0.1968	0.1139	-05.229	028.56	044
05.37	0.7580	-01.288	0.6980	0.6733	0.6050	0.7189	0.0120	-0.1122	0.1982	0.1139	-05.161	028.56	045
05.83	0.8297	-01.373	0.7638	0.6877	0.6066	0.7206	0.0075	-0.1116	0.1984	0.1140	-05.017	028.59	046
06.27	0.9191	-01.486	0.8472	0.7046	0.6079	0.7218	0.0032	-0.1119	0.1992	0.1139	-04.914	028.56	047
06.75	1.0043	-01.571	0.9260	0.7208	0.6069	0.7221	0.0059	-0.1331	0.1990	0.1152	-04.751	028.52	048
07.19	1.0831	-01.635	0.9990	0.7352	0.6044	0.7212	0.0117	-0.1245	0.1995	0.1168	-04.586	028.56	049
07.62	1.1774	-01.729	1.0864	0.7583	0.6074	0.7229	0.0104	-0.1025	0.2012	0.1155	-04.462	028.59	050
08.09	1.2647	-01.777	1.1666	0.7790	0.6071	0.7240	0.0095	-0.1247	0.2007	0.1169	-04.270	028.59	051
08.56	1.3620	-01.843	1.2566	0.8021	0.6062	0.7244	0.0017	-0.1552	0.2038	0.1182	-04.111	028.56	052
09.00	1.4439	-01.849	1.3312	0.8259	0.6076	0.7258	0.0037	-0.1409	0.2004	0.1182	-03.891	028.56	053
09.36	1.5290	-01.862	1.4100	0.8473	0.6067	0.7236	0.0055	-0.1333	0.2016	0.1169	-03.699	028.59	054
09.67	1.6050	-01.888	1.4801	0.8692	0.6083	0.7267	-0.0057	-0.1357	0.2034	0.1184	-03.573	028.59	055
09.90	1.6669	-01.863	1.5375	0.8862	0.6087	0.7272	-0.0105	-0.1225	0.2055	0.1185	-03.396	028.62	056

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 HSWT TEST 89

RUN 015 MACH NO 2.010 RN/L 07040708 Q 1463 PSF TO 561

10/17/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
10.23	1.7272	-01.864	1.5916	0.9063	0.6093	0.7275	-0.0079	-0.1372	0.2070	0.1182	-03.279	028.56	057
10.66	1.8429	-01.818	1.6982	0.9407	0.6102	0.7282	-0.0138	-0.1249	0.2053	0.1179	-02.997	028.49	058
10.93	1.9151	-01.774	1.7645	0.9631	0.6110	0.7291	-0.0188	-0.1048	0.2043	0.1181	-02.814	028.52	059
11.03	1.9694	-01.760	1.8159	0.9774	0.6119	0.7301	-0.0233	-0.0986	0.2051	0.1182	-02.715	028.56	060
11.17	1.9857	-01.754	1.8297	0.9839	0.6108	0.7292	-0.0201	-0.1126	0.2033	0.1184	-02.683	028.59	061
11.18	2.0079	-01.724	1.8509	0.9908	0.6131	0.7314	-0.0170	-0.1199	0.2039	0.1184	-02.609	028.59	062
00.14	0.0747	-00.197	0.0732	0.6048	0.6046	0.7159	0.0231	-0.1360	0.1922	0.1112	-08.004	028.62	063

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 HSWT TEST 89

RUN 016 MACH NO 2.990 RN/L 08260977 Q 1429 PSF TO 581

10/17/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
00.16	-0.0021	-00.095	-0.0033	0.4506	0.4506	0.5269	-0.0069	-0.0108	0.1568	0.0763	39.707	057.46	006
-11.93	-2.2827	-00.913	-2.1414	0.9074	0.4452	0.5319	0.0894	-0.0904	0.1594	0.0867	01.215	057.27	007
-11.90	-2.2737	-00.893	-2.1331	0.9043	0.4450	0.5318	0.0826	-0.1217	0.1585	0.0867	01.193	057.40	008
-11.67	-2.2271	-00.858	-2.0911	0.8858	0.4444	0.5311	0.0852	-0.1366	0.1562	0.0867	01.170	057.33	009
-11.28	-2.1367	-00.803	-2.0088	0.8521	0.4427	0.5294	0.0755	-0.0869	0.1579	0.0867	01.142	057.33	010
-10.83	-2.0230	-00.735	-1.9039	0.8145	0.4424	0.5276	0.0696	-0.0965	0.1571	0.0852	01.104	057.33	011
-10.37	-1.8943	-00.673	-1.7838	0.7755	0.4417	0.5269	0.0665	-0.0829	0.1561	0.0852	01.079	057.33	012
-09.88	-1.7544	-00.573	-1.6529	0.7340	0.4394	0.5261	0.0492	-0.0801	0.1570	0.0868	00.992	057.46	013
-09.40	-1.6358	-00.496	-1.5419	0.7015	0.4402	0.5254	0.0462	-0.0595	0.1575	0.0852	00.921	057.40	014
-08.95	-1.5130	-00.409	-1.4262	0.6693	0.4393	0.5246	0.0399	-0.0623	0.1592	0.0852	00.821	057.33	015
-08.47	-1.3979	-00.332	-1.3176	0.6428	0.4418	0.5270	0.0303	-0.0653	0.1593	0.0852	00.722	057.40	016
-07.99	-1.2834	-00.238	-1.2065	0.6154	0.4417	0.5269	0.0274	-0.0449	0.1600	0.0852	00.564	057.27	017
-07.56	-1.1782	-00.147	-1.1096	0.5946	0.4435	0.5272	0.0265	-0.0537	0.1592	0.0838	00.379	057.40	018
-07.11	-1.0839	-00.083	-1.0202	0.5779	0.4473	0.5295	0.0252	-0.0325	0.1599	0.0822	00.233	057.33	019
-06.65	-0.9914	-00.028	-0.9332	0.5570	0.4451	0.5273	0.0139	-0.0353	0.1583	0.0822	00.087	057.33	020
-06.20	-0.8967	00.017	-0.8435	0.5377	0.4434	0.5257	0.0166	-0.0505	0.1582	0.0823	-00.059	057.46	021
-05.76	-0.8128	00.019	-0.7638	0.5265	0.4471	0.5264	0.0154	-0.0211	0.1575	0.0793	-00.071	057.40	022
-05.32	-0.7494	00.024	-0.7049	0.5138	0.4462	0.5256	0.0188	-0.0653	0.1557	0.0793	-00.096	057.46	023
-04.81	-0.6648	00.025	-0.6251	0.5002	0.4461	0.5253	0.0110	-0.0744	0.1550	0.0793	-00.115	057.40	024
-04.34	-0.6105	00.028	-0.5750	0.4903	0.4454	0.5217	0.0139	-0.0743	0.1552	0.0763	-00.141	057.40	025
-03.90	-0.5438	00.009	-0.5122	0.4817	0.4457	0.5235	0.0061	-0.0608	0.1545	0.0778	-00.049	057.46	026
-03.44	-0.4744	-00.019	-0.4469	0.4715	0.4438	0.5216	0.0088	-0.0527	0.1534	0.0778	00.120	057.40	027
-03.01	-0.4114	-00.031	-0.3875	0.4658	0.4448	0.5211	0.0084	-0.0678	0.1532	0.0763	00.228	057.46	028
-02.56	-0.3616	-00.037	-0.3412	0.4642	0.4485	0.5233	0.0041	-0.0463	0.1527	0.0748	00.309	057.40	029
-02.11	-0.2992	-00.058	-0.2826	0.4573	0.4466	0.5214	0.0002	-0.0694	0.1547	0.0748	00.586	057.40	030
-01.71	-0.2500	-00.047	-0.2365	0.4569	0.4497	0.5244	0.0067	-0.0611	0.1550	0.0747	00.569	057.27	031
-01.26	-0.1956	-00.052	-0.1857	0.4516	0.4474	0.5237	0.0060	-0.0536	0.1552	0.0763	00.838	057.33	032
-00.84	-0.1453	-00.058	-0.1387	0.4494	0.4473	0.5236	0.0019	-0.0468	0.1554	0.0763	01.214	057.33	033
-00.37	-0.0914	-00.063	-0.0884	0.4499	0.4494	0.5256	-0.0023	-0.0328	0.1572	0.0762	02.105	057.27	034
00.05	-0.0372	-00.068	-0.0375	0.4484	0.4485	0.5263	0.0006	-0.0247	0.1565	0.0778	05.592	057.40	035
00.50	0.0049	-00.059	0.0010	0.4474	0.4474	0.5237	-0.0069	-0.0188	0.1574	0.0763	-36.355	057.40	036
00.93	0.0665	-00.070	0.0593	0.4511	0.4501	0.5264	-0.0079	-0.0111	0.1562	0.0763	-03.205	057.33	037
01.38	0.1126	-00.085	0.1018	0.4539	0.4513	0.5262	-0.0122	-0.0116	0.1555	0.0749	-02.290	057.46	038
01.81	0.1624	-00.073	0.1481	0.4547	0.4498	0.5246	-0.0133	-0.0044	0.1552	0.0748	-01.374	057.40	039
02.26	0.2201	-00.077	0.2021	0.4604	0.4521	0.5269	-0.0217	0.0166	0.1553	0.0748	-01.065	057.33	040
02.71	0.2741	-00.091	0.2524	0.4648	0.4524	0.5272	-0.0189	-0.0126	0.1553	0.0748	-01.004	057.40	041
03.15	0.3238	-00.096	0.2985	0.4693	0.4522	0.5270	-0.0201	0.0099	0.1539	0.0748	-00.900	057.40	042
03.60	0.3861	-00.116	0.3569	0.4775	0.4541	0.5274	-0.0141	-0.0039	0.1553	0.0733	-00.915	057.33	043
04.02	0.4406	-00.130	0.4076	0.4860	0.4563	0.5295	-0.0222	0.0023	0.1554	0.0733	-00.894	057.27	044
04.49	0.5096	-00.165	0.4724	0.4937	0.4552	0.5300	-0.0267	-0.0134	0.1574	0.0748	-00.983	057.40	045
04.91	0.5783	-00.166	0.5371	0.5044	0.4566	0.5315	-0.0280	-0.0212	0.1585	0.0749	-00.873	057.46	046
05.35	0.6635	-00.173	0.6175	0.5218	0.4619	0.5367	-0.0298	-0.0068	0.1604	0.0748	-00.791	057.40	047
05.85	0.7327	-00.174	0.6818	0.5361	0.4619	0.5367	-0.0241	-0.0135	0.1621	0.0748	-00.722	057.40	048
06.29	0.8070	-00.168	0.7515	0.5483	0.4627	0.5390	-0.0361	-0.0235	0.1647	0.0763	-00.631	057.33	049
06.76	0.8919	-00.150	0.8309	0.5666	0.4648	0.5411	-0.0235	-0.0514	0.1655	0.0763	-00.512	057.33	050
07.24	0.9864	-00.104	0.9201	0.5844	0.4637	0.5415	-0.0294	-0.0306	0.1664	0.0778	-00.320	057.40	051
07.70	1.0862	-00.049	1.0142	0.6057	0.4643	0.5421	-0.0348	-0.0623	0.1688	0.0778	-00.137	057.40	052
08.16	1.1919	00.024	1.1136	0.6312	0.4667	0.5445	-0.0302	-0.0700	0.1699	0.0777	00.062	057.27	053
08.68	1.3014	00.108	1.2157	0.6599	0.4690	0.5467	-0.0365	-0.0570	0.1704	0.0778	00.252	057.33	054
09.12	1.4144	00.209	1.3226	0.6853	0.4671	0.5479	-0.0490	-0.0380	0.1709	0.0808	00.450	057.40	055
09.55	1.5253	00.293	1.4264	0.7152	0.4686	0.5479	-0.0431	-0.0379	0.1715	0.0793	00.583	057.40	056

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 HSWT TEST 89

RUN 016 MACH NO 2.990 RN/L 08260977 Q 1429 PSF TO 581 10/17/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
09.85	1.6291	00.341	1.5246	0.7426	0.4709	0.5502	-0.0440	-0.0534	0.1715	0.0793	00.635	057.40	057
10.14	1.7116	00.409	1.6019	0.7654	0.4714	0.5522	-0.0445	-0.0842	0.1732	0.0808	00.726	057.46	058
10.46	1.7976	00.462	1.6817	0.7920	0.4735	0.5528	-0.0456	-0.0628	0.1739	0.0793	00.781	057.40	059
10.79	1.9085	00.529	1.7859	0.8235	0.4746	0.5539	-0.0576	-0.0284	0.1746	0.0793	00.842	057.40	060
11.21	2.0309	00.615	1.8991	0.8642	0.4785	0.5578	-0.0587	-0.0227	0.1769	0.0793	00.920	057.40	061
11.39	2.0960	00.646	1.9602	0.8832	0.4785	0.5578	-0.0595	-0.0158	0.1774	0.0793	00.937	057.40	062
11.41	2.1266	00.670	1.9897	0.8939	0.4798	0.5591	-0.0527	-0.0149	0.1769	0.0793	00.958	057.40	063
11.49	2.1458	00.649	2.0074	0.8959	0.4790	0.5583	-0.0638	0.0208	0.1767	0.0793	00.919	057.40	064
00.16	0.0589	-00.047	0.0577	0.4549	0.4547	0.5310	-0.0043	-0.0106	0.1555	0.0763	-02.439	057.33	065

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 — HSWT TEST 89

RUN 017 MACH NO 2.990 RN/L 08177071 Q 1427 PSF TO 584 — 10/17/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
00.15	0.0362	-00.053	0.0350	0.4356	0.4355	0.5121	-0.0178	-0.0251	0.0011	0.0766	-04.410	057.26	006
-11.65	-2.2126	-00.959	-2.0801	0.8684	0.4303	0.5173	0.0847	-0.0418	-0.0081	0.0870	01.316	057.20	007
-11.26	-2.1289	-00.887	-2.0043	0.8356	0.4281	0.5136	0.0682	-0.0080	-0.0086	0.0856	01.266	057.33	008
-10.77	-1.9945	-00.807	-1.8797	0.7910	0.4257	0.5127	0.0658	-0.0471	-0.0084	0.0870	01.229	057.26	009
-10.34	-1.8575	-00.716	-1.7514	0.7496	0.4232	0.5102	0.0595	-0.0792	-0.0079	0.0871	01.171	057.39	010
-09.83	-1.7432	-00.623	-1.6450	0.7163	0.4249	0.5104	0.0529	-0.0516	-0.0073	0.0855	01.086	057.20	011
-09.40	-1.6027	-00.540	-1.5120	0.6803	0.4244	0.5099	0.0502	-0.0830	-0.0075	0.0856	01.024	057.33	012
-08.91	-1.4841	-00.445	-1.4000	0.6520	0.4271	0.5127	0.0361	-0.0340	-0.0060	0.0855	00.912	057.26	013
-08.44	-1.3746	-00.361	-1.2973	0.6221	0.4251	0.5106	0.0333	-0.0279	-0.0048	0.0855	00.799	057.26	014
-07.97	-1.2791	-00.280	-1.2074	0.6014	0.4281	0.5121	0.0318	-0.0669	-0.0072	0.0840	00.666	057.13	015
-07.51	-1.1597	-00.203	-1.0939	0.5748	0.4269	0.5110	0.0339	-0.0670	-0.0052	0.0841	00.531	057.33	016
-07.06	-1.0741	-00.132	-1.0134	0.5562	0.4275	0.5115	0.0224	-0.0550	-0.0059	0.0840	00.374	057.20	017
-06.60	-0.9729	-00.067	-0.9171	0.5375	0.4285	0.5125	0.0213	-0.0558	-0.0041	0.0840	00.210	057.26	018
-06.18	-0.8877	-00.040	-0.8363	0.5227	0.4296	0.5136	0.0134	-0.0574	-0.0037	0.0840	00.138	057.26	019
-05.71	-0.8133	00.002	-0.7663	0.5112	0.4324	0.5135	0.0089	-0.0511	-0.0025	0.0811	-00.006	057.33	020
-05.26	-0.7355	-00.007	-0.6927	0.4988	0.4332	0.5128	0.0118	-0.0654	-0.0024	0.0796	00.030	057.33	021
-04.78	-0.6659	-00.000	-0.6274	0.4879	0.4339	0.5120	0.0142	-0.0351	-0.0013	0.0781	00.001	057.33	022
-04.31	-0.6010	-00.011	-0.5666	0.4776	0.4336	0.5117	0.0065	-0.0364	-0.0009	0.0780	00.058	057.20	023
-03.85	-0.5337	-00.014	-0.5036	0.4662	0.4313	0.5094	0.0021	-0.0147	-0.0007	0.0781	00.079	057.33	024
-03.42	-0.4722	-00.035	-0.4456	0.4601	0.4327	0.5092	0.0014	-0.0146	0.0001	0.0765	00.223	057.20	025
-02.99	-0.4051	-00.055	-0.3820	0.4545	0.4340	0.5091	0.0009	-0.0293	-0.0009	0.0751	00.409	057.26	026
-02.54	-0.3586	-00.062	-0.3391	0.4486	0.4331	0.5082	0.0002	-0.0363	0.0004	0.0751	00.522	057.26	027
-02.11	-0.3008	-00.058	-0.2848	0.4416	0.4308	0.5074	-0.0009	-0.0355	0.0012	0.0766	00.582	057.33	028
-01.68	-0.2440	-00.079	-0.2311	0.4410	0.4340	0.5090	-0.0094	0.0019	0.0001	0.0750	00.985	057.20	029
-01.24	-0.1935	-00.077	-0.1842	0.4359	0.4319	0.5085	-0.0066	-0.0264	0.0002	0.0766	01.208	057.33	030
-00.81	-0.1365	-00.073	-0.1304	0.4344	0.4325	0.5091	-0.0079	-0.0106	0.0001	0.0766	01.622	057.26	031
-00.34	-0.0865	-00.079	-0.0839	0.4345	0.4340	0.5091	-0.0053	-0.0313	0.0006	0.0751	02.787	057.33	032
00.10	-0.0411	-00.069	-0.0419	0.4334	0.4335	0.5100	-0.0100	-0.0161	0.0002	0.0765	05.126	057.13	033
00.55	0.0130	-00.066	0.0089	0.4329	0.4328	0.5079	-0.0069	-0.0237	0.0018	0.0751	-15.383	057.33	034
01.00	0.0634	-00.072	0.0558	0.4348	0.4337	0.5087	-0.0078	-0.0167	0.0004	0.0750	-03.462	057.20	035
01.43	0.1141	-00.087	0.1032	0.4360	0.4333	0.5083	-0.0122	-0.0180	0.0011	0.0750	-02.318	057.20	036
01.86	0.1645	-00.085	0.1503	0.4411	0.4360	0.5110	-0.0096	-0.0331	0.0013	0.0750	-01.566	057.20	037
02.31	0.2262	-00.088	0.2083	0.4457	0.4370	0.5105	-0.0180	-0.0128	0.0022	0.0736	-01.184	057.26	038
02.76	0.2764	-00.103	0.2552	0.4471	0.4343	0.5094	-0.0153	-0.0201	0.0019	0.0751	-01.130	057.33	039
03.21	0.3422	-00.106	0.3173	0.4528	0.4343	0.5095	-0.0237	-0.0146	0.0019	0.0751	-00.937	057.33	040
03.63	0.4005	-00.119	0.3720	0.4634	0.4390	0.5126	-0.0246	-0.0303	0.0027	0.0736	-00.900	057.33	041
04.08	0.4664	-00.138	0.4341	0.4700	0.4380	0.5131	-0.0225	-0.0152	0.0020	0.0751	-00.902	057.33	042
04.53	0.5294	-00.159	0.4930	0.4804	0.4399	0.5150	-0.0305	-0.0321	0.0033	0.0751	-00.915	057.26	043
05.00	0.6059	-00.168	0.5653	0.4915	0.4404	0.5155	-0.0323	-0.0030	0.0032	0.0751	-00.841	057.33	044
05.43	0.6641	-00.173	0.6193	0.5027	0.4418	0.5169	-0.0262	-0.0246	0.0023	0.0751	-00.789	057.33	045
05.90	0.7420	-00.164	0.6923	0.5186	0.4447	0.5197	-0.0314	-0.0114	0.0038	0.0751	-00.673	057.26	046
06.35	0.8222	-00.147	0.7681	0.5312	0.4430	0.5196	-0.0326	-0.0267	0.0037	0.0766	-00.545	057.33	047
06.83	0.9146	-00.128	0.8552	0.5510	0.4454	0.5205	-0.0272	-0.0333	0.0036	0.0751	-00.425	057.33	048
07.31	1.0014	-00.075	0.9364	0.5710	0.4472	0.5239	-0.0360	-0.0207	0.0049	0.0766	-00.228	057.39	049
07.79	1.1010	-00.020	1.0305	0.5901	0.4450	0.5231	-0.0272	-0.0418	0.0032	0.0781	-00.055	057.39	050
08.25	1.2038	00.062	1.1269	0.6174	0.4493	0.5259	-0.0294	-0.0430	0.0032	0.0766	00.156	057.39	051
08.74	1.3076	00.135	1.2243	0.6417	0.4482	0.5264	-0.0383	-0.0681	0.0059	0.0781	00.313	057.39	052
09.20	1.4332	00.239	1.3429	0.6728	0.4493	0.5274	-0.0366	-0.0239	0.0044	0.0781	00.507	057.39	053
09.59	1.5399	00.339	1.4431	0.7020	0.4518	0.5299	-0.0480	-0.0273	0.0066	0.0781	00.669	057.26	054
09.92	1.6531	00.406	1.5502	0.7320	0.4540	0.5321	-0.0420	-0.0195	0.0066	0.0781	00.747	057.33	055
10.20	1.7304	00.440	1.6222	0.7554	0.4561	0.5341	-0.0424	-0.0499	0.0076	0.0780	00.772	057.20	056

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 HSWT TEST 89

RUN 017 MACH NO 2.990 RN/L 08177071 Q 1427 PSF TO 584

10/17/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
10.50	1.8144	00.526	1.7011	0.7778	0.4547	0.5343	-0.0394	-0.0577	0.0075	0.0796	00.881	057.33	057
10.91	1.9240	00.592	1.8030	0.8113	0.4554	0.5350	-0.0402	-0.0588	0.0094	0.0796	00.935	057.26	058
11.25	2.0393	00.663	1.9105	0.8485	0.4597	0.5392	-0.0447	-0.0604	0.0101	0.0796	00.983	057.26	059
11.43	2.0904	00.697	1.9577	0.8655	0.4605	0.5401	-0.0418	-0.0377	0.0090	0.0796	01.012	057.33	060
11.47	2.1264	00.704	1.9926	0.8732	0.4597	0.5393	-0.0422	-0.0305	0.0103	0.0796	01.006	057.39	061
11.50	2.1520	00.702	2.0166	0.8825	0.4627	0.5408	-0.0425	-0.0304	0.0094	0.0781	00.990	057.33	062
11.50	2.1443	00.708	2.0094	0.8789	0.4607	0.5403	-0.0423	-0.0380	0.0099	0.0796	01.004	057.33	063
11.51	2.1580	00.737	2.0223	0.8842	0.4631	0.5411	-0.0354	-0.0448	0.0108	0.0781	01.038	057.26	064
00.14	0.0670	-00.063	0.0659	0.4370	0.4369	0.5135	-0.0150	-0.0021	0.0008	0.0766	-02.840	057.33	065

GVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 — HSWT TEST 89

RUN 016 MACH NO 2.990 RN/L 9.3101905 . 1427 PSF TO 588 — 10/17/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
00.17	0.0423	00.052	0.0412	0.3778	0.3777	0.4394	-0.0079	-0.0244	0.0000	0.0617	03.720	057.33	006
-11.98	-1.8833	-03.729	-1.7655	0.7529	0.3700	0.4510	0.1026	-0.0224	-0.0009	0.0811	06.015	057.26	007
-11.63	-1.7835	-03.805	-1.6718	0.7243	0.3724	0.4520	0.0981	-0.0076	-0.0004	0.0795	06.482	057.20	008
-11.21	-1.6566	-03.877	-1.5527	0.6870	0.3719	0.4514	0.0929	0.0295	-0.0004	0.0796	07.109	057.26	009
-10.77	-1.5185	-03.928	-1.4221	0.6439	0.3726	0.4507	0.0849	0.0424	-0.0011	0.0781	07.858	057.33	010
-10.32	-1.3847	-03.920	-1.2957	0.6139	0.3718	0.4499	0.0852	0.0246	-0.0012	0.0781	08.600	057.26	011
-09.83	-1.2616	-03.769	-1.1797	0.5811	0.3711	0.4477	0.0830	0.0173	-0.0006	0.0766	09.075	057.33	012
-09.32	-1.1500	-03.594	-1.0748	0.5521	0.3709	0.4459	0.0846	0.0249	-0.0013	0.0751	09.494	057.26	013
-08.85	-1.0375	-03.380	-0.9686	0.5228	0.3676	0.4441	0.0719	-0.0080	-0.0008	0.0766	09.897	057.26	014
-08.38	-0.9338	-03.165	-0.8700	0.5017	0.3694	0.4430	0.0661	-0.0057	-0.0014	0.0736	10.296	057.33	015
-07.91	-0.8404	-02.933	-0.7815	0.4822	0.3701	0.4422	0.0605	0.0035	-0.0005	0.0721	10.602	057.26	016
-07.45	-0.7759	-02.767	-0.7218	0.4646	0.3671	0.4392	0.0519	0.0063	-0.0004	0.0721	10.834	057.20	017
-06.99	-0.6991	-02.587	-0.6490	0.4517	0.3694	0.4399	0.0461	-0.0115	-0.0007	0.0706	11.242	057.20	018
-06.47	-0.6259	-02.388	-0.5805	0.4355	0.3673	0.4364	0.0435	-0.0137	-0.0007	0.0691	11.590	057.26	019
-06.05	-0.5642	-02.228	-0.5223	0.4254	0.3680	0.4356	0.0341	-0.0018	-0.0002	0.0676	11.997	057.26	020
-05.58	-0.5027	-02.051	-0.4644	0.4170	0.3699	0.4360	0.0356	-0.0182	-0.0001	0.0661	12.397	057.26	021
-05.09	-0.4482	-01.891	-0.4136	0.4093	0.3709	0.4341	0.0264	-0.0062	-0.0005	0.0632	12.819	057.33	022
-04.60	-0.3927	-01.733	-0.3618	0.4004	0.3701	0.4332	0.0257	-0.0152	-0.0009	0.0632	13.408	057.33	023
-04.15	-0.3480	-01.593	-0.3204	0.3940	0.3698	0.4316	0.0252	-0.0239	-0.0004	0.0617	13.908	057.39	024
-03.68	-0.3112	-01.455	-0.2870	0.3871	0.3679	0.4297	0.0209	-0.0109	0.0004	0.0618	14.202	057.46	025
-03.21	-0.2677	-01.311	-0.2465	0.3850	0.3706	0.4308	0.0172	-0.0279	-0.0007	0.0602	14.881	057.33	026
-02.73	-0.2242	-01.139	-0.2062	0.3813	0.3710	0.4312	0.0164	-0.0146	0.0003	0.0602	15.432	057.33	027
-02.27	-0.1965	-00.962	-0.1816	0.3798	0.3724	0.4325	0.0161	-0.0166	0.0004	0.0601	14.878	057.26	028
-01.85	-0.1599	-00.816	-0.1479	0.3752	0.3702	0.4319	0.0089	-0.0269	-0.0004	0.0617	15.500	057.33	029
-01.36	-0.1241	-00.636	-0.1153	0.3736	0.3707	0.4325	0.0050	-0.0221	-0.0001	0.0617	15.557	057.39	030
-00.93	-0.1001	-00.477	-0.0941	0.3723	0.3707	0.4324	0.0081	-0.0085	0.0011	0.0617	14.465	057.33	031
-00.47	-0.0643	-00.298	-0.0613	0.3726	0.3721	0.4338	0.0045	-0.0333	-0.0004	0.0616	14.074	057.26	032
-00.03	-0.0325	-00.119	-0.0323	0.3711	0.3711	0.4328	0.0006	-0.0284	-0.0000	0.0617	11.136	057.33	033
00.43	-0.0076	00.050	-0.0104	0.3730	0.3731	0.4347	-0.0033	-0.0316	0.0007	0.0616	-19.681	057.20	034
00.90	0.0255	00.228	0.0196	0.3738	0.3734	0.4351	-0.0048	-0.0343	-0.0001	0.0616	27.218	057.26	035
01.34	0.0511	00.383	0.0423	0.3763	0.3752	0.4354	-0.0061	-0.0368	0.0010	0.0602	22.553	057.33	036
01.81	0.0833	00.566	0.0684	0.3783	0.3760	0.4377	-0.0111	-0.0403	0.0009	0.0617	21.409	057.33	037
02.26	0.1169	00.752	0.1021	0.3800	0.3757	0.4360	-0.0162	-0.0438	0.0018	0.0603	19.548	057.46	038
02.72	0.1544	00.898	0.1363	0.3843	0.3774	0.4377	-0.0142	-0.0530	0.0016	0.0603	17.678	057.39	039
03.20	0.1872	01.058	0.1659	0.3856	0.3758	0.4376	-0.0157	-0.0482	0.0022	0.0618	17.167	057.52	040
03.66	0.2292	01.207	0.2044	0.3939	0.3801	0.4403	-0.0206	-0.0662	0.0021	0.0602	16.002	057.33	041
04.10	0.2666	01.336	0.2389	0.3966	0.3785	0.4402	-0.0221	-0.0610	0.0026	0.0617	15.219	057.33	042
04.59	0.3117	01.502	0.2803	0.4042	0.3805	0.4421	-0.0239	-0.0563	0.0022	0.0616	14.632	057.26	043
05.01	0.3607	01.641	0.3262	0.4095	0.3795	0.4426	-0.0220	-0.0581	0.0034	0.0631	13.821	057.26	044
05.44	0.3981	01.787	0.3602	0.4170	0.3810	0.4441	-0.0305	-0.0616	0.0031	0.0631	13.632	057.26	045
05.98	0.4701	01.965	0.4275	0.4316	0.3847	0.4479	-0.0356	-0.0726	0.0035	0.0631	12.700	057.26	046
06.47	0.5368	02.152	0.4901	0.4418	0.3837	0.4483	-0.0295	-0.0732	0.0043	0.0646	12.178	057.26	047
06.91	0.6032	02.329	0.5529	0.4515	0.3817	0.4494	-0.0236	-0.0589	0.0060	0.0676	11.732	057.26	048
07.40	0.6776	02.503	0.6224	0.4684	0.3844	0.4520	-0.0318	-0.0465	0.0059	0.0676	11.211	057.26	049
07.89	0.7502	02.691	0.6906	0.4817	0.3824	0.4530	-0.0326	-0.0630	0.0064	0.0707	10.897	057.39	050
08.35	0.8210	02.883	0.7560	0.5021	0.3869	0.4576	-0.0330	-0.0806	0.0076	0.0706	10.659	057.33	051
08.89	0.9199	03.125	0.8488	0.5263	0.3889	0.4595	-0.0332	-0.0703	0.0077	0.0706	10.320	057.33	052
09.31	1.0231	03.307	0.9467	0.5500	0.3896	0.4618	-0.0299	-0.0880	0.0080	0.0722	09.819	057.39	053
09.78	1.1199	03.537	1.0375	0.5737	0.3891	0.4627	-0.0230	-0.0912	0.0092	0.0736	09.596	057.33	054
10.12	1.2172	03.687	1.1293	0.6002	0.3925	0.4661	-0.0340	-0.0811	0.0099	0.0736	09.204	057.33	055
10.42	1.2879	03.814	1.1953	0.6212	0.3949	0.4685	-0.0236	-0.0964	0.0094	0.0736	08.997	057.33	056

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 HSWT TEST 89

RUN 018 MACH NO 2.990 RN/L 08101905 Q 1427 PSF TO 588 10/17/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
10.74	1.3549	03.932	1.2576	0.6407	0.3952	0.4688	-0.0202	-0.1130	0.0102	0.0736	08.815	057.33	057
11.10	1.4720	04.043	1.3682	0.6722	0.3963	0.4699	-0.0177	-0.1068	0.0096	0.0736	08.344	057.33	058
11.52	1.5746	04.182	1.4632	0.7053	0.3989	0.4740	-0.0222	-0.0727	0.0104	0.0751	08.068	057.26	059
11.58	1.6317	04.245	1.5167	0.7233	0.4013	0.4764	-0.0185	-0.1182	0.0113	0.0751	07.904	057.26	060
11.69	1.6619	04.269	1.5459	0.7304	0.4019	0.4771	-0.0225	-0.0821	0.0113	0.0752	07.804	057.39	061
11.80	1.6653	04.278	1.5481	0.7333	0.4012	0.4749	-0.0226	-0.0820	0.0104	0.0737	07.805	057.39	062
11.81	1.6711	04.292	1.5534	0.7357	0.4023	0.4760	-0.0188	-0.1041	0.0111	0.0737	07.803	057.46	063
00.20	0.0577	00.064	0.0564	0.3778	0.3776	0.4408	-0.0117	-0.0327	0.0003	0.0632	03.348	057.39	064

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 — HSWT TEST 89

RUN 019 MACH NO 3.980 RN/L 11526396 Q 1454 PSF TO 590 — 10/17/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AH	CP	PO	PNT
00.36	0.0034	00.067	0.0015	0.3045	0.3045	0.3536	-0.0100	-0.0532	-0.0018	0.0491	60.111	135.02	006
-13.56	-1.5182	-03.357	-1.4351	0.5829	0.3073	0.3666	0.0861	0.0322	-0.0019	0.0593	06.718	134.32	007
-10.44	-1.4656	-03.296	-1.3858	0.5671	0.3067	0.3660	0.0728	0.0268	-0.0020	0.0593	06.832	134.67	008
-10.21	-1.4172	-03.227	-1.3406	0.5515	0.3051	0.3645	0.0738	0.0089	-0.0020	0.0593	06.917	134.67	009
-09.98	-1.3687	-03.174	-1.2950	0.5385	0.3058	0.3652	0.0742	0.0137	-0.0024	0.0593	07.045	134.67	010
-09.76	-1.3234	-03.105	-1.2497	0.5238	0.3045	0.3638	0.0715	0.0099	-0.0017	0.0593	07.143	134.67	011
-09.50	-1.2753	-03.052	-1.2076	0.5134	0.3040	0.3634	0.0723	0.0071	-0.0017	0.0593	07.270	134.32	012
-09.25	-1.2270	-02.991	-1.1621	0.4972	0.3039	0.3618	0.0727	-0.0028	-0.0022	0.0579	07.405	134.32	013
-09.02	-1.1756	-02.923	-1.1137	0.4829	0.3022	0.3601	0.0648	-0.0058	-0.0017	0.0579	07.547	134.32	014
-08.77	-1.1233	-02.874	-1.0642	0.4697	0.3020	0.3598	0.0672	0.0009	-0.0019	0.0578	07.772	133.98	015
-08.52	-1.0768	-02.793	-1.0208	0.4535	0.2973	0.3566	0.0663	-0.0083	-0.0014	0.0593	07.871	134.32	016
-08.32	-1.0279	-02.735	-0.9739	0.4439	0.2983	0.3562	0.0620	-0.0177	-0.0013	0.0578	08.083	133.98	017
-08.07	-0.9767	-02.665	-0.9252	0.4315	0.2973	0.3566	0.0640	-0.0106	-0.0015	0.0593	08.289	133.98	018
-07.85	-0.9250	-02.603	-0.8755	0.4228	0.2992	0.3571	0.0592	-0.0122	-0.0009	0.0578	08.548	133.98	019
-07.61	-0.8874	-02.533	-0.8401	0.4130	0.2981	0.3560	0.0548	-0.0140	-0.0012	0.0578	08.671	133.63	020
-07.37	-0.8355	-02.479	-0.7905	0.4015	0.2968	0.3547	0.0500	-0.0155	-0.0006	0.0578	09.015	133.63	021
-07.15	-0.7857	-02.403	-0.7427	0.3915	0.2961	0.3539	0.0487	-0.0239	-0.0010	0.0578	09.293	133.98	022
-06.93	-0.7515	-02.334	-0.7100	0.3867	0.2982	0.3546	0.0478	-0.0250	-0.0011	0.0564	09.436	133.63	023
-06.71	-0.7019	-02.258	-0.6628	0.3742	0.2942	0.3506	0.0464	-0.0259	-0.0011	0.0564	09.774	133.98	024
-06.42	-0.6620	-02.191	-0.6250	0.3660	0.2939	0.3502	0.0416	-0.0127	-0.0014	0.0564	10.054	133.98	025
-06.25	-0.6258	-02.115	-0.5901	0.3602	0.2938	0.3502	0.0371	-0.0144	-0.0007	0.0564	10.268	133.98	026
-06.01	-0.5920	-02.027	-0.5581	0.3527	0.2924	0.3487	0.0326	-0.0161	-0.0010	0.0564	10.400	134.32	027
-05.75	-0.5541	-01.963	-0.5220	0.3466	0.2925	0.3475	0.0316	-0.0243	-0.0014	0.0549	10.764	134.67	028
-05.52	-0.5219	-01.881	-0.4916	0.3392	0.2904	0.3468	0.0308	-0.0401	-0.0015	0.0564	10.947	134.67	029
-05.29	-0.4934	-01.816	-0.4646	0.3342	0.2899	0.3449	0.0296	-0.0189	-0.0010	0.0549	11.178	134.67	030
-05.00	-0.4643	-01.750	-0.4370	0.3316	0.2922	0.3456	0.0222	-0.0284	-0.0010	0.0535	11.453	134.67	031
-04.80	-0.4428	-01.670	-0.4167	0.3293	0.2933	0.3467	0.0222	-0.0367	-0.0015	0.0535	11.459	134.67	032
-04.54	-0.4143	-01.617	-0.3899	0.3238	0.2919	0.3439	0.0221	-0.0448	-0.0019	0.0520	11.861	134.32	033
-04.31	-0.3928	-01.537	-0.3696	0.3217	0.2930	0.3450	0.0183	-0.0390	-0.0016	0.0520	11.888	134.32	034
-04.09	-0.3623	-01.475	-0.3406	0.3156	0.2905	0.3440	0.0144	-0.0329	-0.0014	0.0535	12.378	134.67	035
-03.84	-0.3416	-01.400	-0.3212	0.3157	0.2935	0.3440	0.0179	-0.0479	-0.0020	0.0505	12.448	134.32	036
-03.62	-0.3160	-01.343	-0.2969	0.3128	0.2934	0.3439	0.0140	-0.0272	-0.0018	0.0505	12.915	134.32	037
-03.37	-0.2941	-01.271	-0.2764	0.3092	0.2925	0.3430	0.0139	-0.0426	-0.0017	0.0505	13.133	134.32	038
-03.15	-0.2763	-01.192	-0.2597	0.3079	0.2931	0.3436	0.0139	-0.0581	-0.0026	0.0505	13.108	134.32	039
-02.90	-0.2513	-01.130	-0.2360	0.3073	0.2950	0.3440	0.0137	-0.0590	-0.0025	0.0490	13.668	133.98	040
-02.68	-0.2336	-01.053	-0.2196	0.3051	0.2945	0.3450	0.0097	-0.0459	-0.0019	0.0505	13.651	133.98	041
-02.46	-0.2156	-00.986	-0.2028	0.3043	0.2953	0.3443	0.0127	-0.0460	-0.0017	0.0490	13.890	133.98	042
-02.23	-0.1902	-00.904	-0.1785	0.3036	0.2964	0.3454	0.0018	-0.0488	-0.0016	0.0490	14.434	133.98	043
-02.01	-0.1839	-00.825	-0.1734	0.3016	0.2953	0.3458	0.0084	-0.0485	-0.0012	0.0505	13.634	133.98	044
-01.77	-0.1662	-00.745	-0.1570	0.3038	0.2958	0.3448	0.0045	-0.0501	-0.0014	0.0490	13.613	133.98	045
-01.55	-0.1524	-00.665	-0.1443	0.3005	0.2965	0.3455	0.0041	-0.0510	-0.0023	0.0490	13.257	133.98	046
-01.34	-0.1344	-00.586	-0.1274	0.3019	0.2989	0.3479	0.0037	-0.0593	-0.0011	0.0490	13.201	133.98	047
-01.09	-0.1204	-00.503	-0.1148	0.2992	0.2970	0.3460	-0.0003	-0.0460	-0.0022	0.0490	12.684	134.32	048
-00.88	-0.1026	-00.431	-0.0981	0.2994	0.2978	0.3469	0.0029	-0.0536	-0.0025	0.0490	12.757	134.32	049
-00.64	-0.0923	-00.352	-0.0890	0.3022	0.3012	0.3487	-0.0045	-0.0557	-0.0012	0.0476	11.581	134.32	050
-00.44	-0.0785	-00.264	-0.0762	0.2993	0.2987	0.3477	-0.0012	-0.0708	-0.0019	0.0490	10.220	134.32	051
-00.20	-0.0646	-00.193	-0.0636	0.2982	0.2980	0.3485	-0.0019	-0.0570	-0.0011	0.0505	09.063	134.32	052
00.02	-0.0470	-00.106	-0.0471	0.3016	0.3016	0.3492	-0.0092	-0.0592	-0.0015	0.0476	06.709	134.32	053
00.23	-0.0335	-00.025	-0.0347	0.3000	0.3002	0.3492	-0.0059	-0.0444	-0.0021	0.0491	02.271	134.67	054
00.48	-0.0154	00.054	-0.0180	0.3021	0.3022	0.3513	-0.0062	-0.0597	-0.0011	0.0491	-10.666	134.67	055
00.70	-0.0052	00.149	-0.0089	0.3014	0.3014	0.3505	-0.0102	-0.0686	-0.0016	0.0490	-87.553	134.32	056

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 HSWT TEST 89

RUN 019 MACH NO 3.980 RN/L 11526396 Q 1454 PSF TO 590

10/17/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
00.95	0.0166	00.221	0.0117	0.3007	0.3005	0.3495	-0.0041	-0.0680	-0.0011	0.0490	40.328	134.32	057
01.17	0.0305	00.308	0.0243	0.3047	0.3042	0.3517	-0.0084	-0.0548	-0.0020	0.0476	30.663	134.32	058
01.39	0.0410	00.386	0.0336	0.3038	0.3029	0.3519	-0.0124	-0.0560	-0.0021	0.0490	28.631	134.32	059
01.61	0.0591	00.457	0.0506	0.3034	0.3019	0.3509	-0.0098	-0.0561	-0.0009	0.0490	23.504	134.32	060
01.86	0.0694	00.552	0.0595	0.3055	0.3034	0.3525	-0.0139	-0.0575	-0.0010	0.0490	24.185	134.32	061
02.10	0.0875	00.615	0.0762	0.3084	0.3054	0.3530	-0.0146	-0.0580	-0.0009	0.0476	21.342	134.32	062
02.32	0.0980	00.701	0.0856	0.3075	0.3038	0.3514	-0.0152	-0.0662	0.0006	0.0476	21.738	134.32	063
02.54	0.1201	00.775	0.1065	0.3090	0.3039	0.3515	-0.0196	-0.0602	0.0000	0.0475	19.634	133.98	064
02.76	0.1345	00.837	0.1197	0.3106	0.3045	0.3520	-0.0202	-0.0607	0.0001	0.0475	18.905	133.98	065
02.98	0.1486	00.933	0.1326	0.3122	0.3049	0.3539	-0.0244	-0.0622	0.0001	0.0490	19.072	133.98	066
03.22	0.1702	00.986	0.1528	0.3137	0.3046	0.3522	-0.0252	-0.0552	0.0006	0.0476	17.597	134.32	067
03.44	0.1843	01.073	0.1657	0.3156	0.3051	0.3542	-0.0259	-0.0560	0.0007	0.0490	17.687	134.32	068
03.68	0.2102	01.137	0.1901	0.3185	0.3056	0.3532	-0.0231	-0.0707	0.0011	0.0476	16.439	134.32	069
03.90	0.2244	01.208	0.2032	0.3190	0.3045	0.3521	-0.0273	-0.0646	0.0014	0.0476	16.348	134.32	070
04.12	0.2500	01.280	0.2275	0.3228	0.3057	0.3547	-0.0247	-0.0647	0.0017	0.0490	15.558	134.32	071
04.33	0.2720	01.352	0.2480	0.3276	0.3080	0.3570	-0.0289	-0.0733	0.0021	0.0490	15.103	134.32	072
04.61	0.2976	01.425	0.2719	0.3316	0.3086	0.3577	-0.0263	-0.0734	0.0024	0.0490	14.547	134.32	073
04.81	0.3156	01.496	0.2886	0.3349	0.3096	0.3586	-0.0271	-0.0667	0.0020	0.0490	14.403	134.32	074
05.06	0.3444	01.557	0.3159	0.3372	0.3081	0.3586	-0.0279	-0.0743	0.0017	0.0505	13.740	134.67	075
05.29	0.3670	01.642	0.3369	0.3423	0.3098	0.3603	-0.0289	-0.0681	0.0031	0.0505	13.594	134.32	076
05.52	0.3951	01.720	0.3635	0.3467	0.3101	0.3606	-0.0230	-0.0602	0.0032	0.0505	13.222	134.67	077
05.72	0.4259	01.789	0.3927	0.3531	0.3122	0.3627	-0.0308	-0.0694	0.0024	0.0505	12.764	134.32	078
06.00	0.4577	01.867	0.4227	0.3570	0.3108	0.3628	-0.0281	-0.0621	0.0032	0.0520	12.395	134.67	079
06.23	0.4924	01.947	0.4553	0.3660	0.3144	0.3649	-0.0389	-0.0650	0.0036	0.0505	12.013	134.32	080
06.46	0.5257	02.030	0.4872	0.3696	0.3124	0.3644	-0.0321	-0.0793	0.0033	0.0520	11.731	134.32	081
06.72	0.5628	02.106	0.5220	0.3793	0.3156	0.3676	-0.0327	-0.0656	0.0034	0.0520	11.369	134.32	082
06.98	0.5999	02.193	0.5570	0.3873	0.3167	0.3687	-0.0329	-0.0740	0.0040	0.0520	11.090	134.32	083
07.21	0.6464	02.265	0.6013	0.3966	0.3180	0.3699	-0.0336	-0.0677	0.0046	0.0520	10.644	133.98	084
07.47	0.6818	02.335	0.6347	0.4043	0.3184	0.3703	-0.0374	-0.0617	0.0049	0.0520	10.402	134.32	085
07.70	0.7267	02.404	0.6775	0.4130	0.3185	0.3705	-0.0448	-0.0564	0.0050	0.0520	10.048	134.32	086
07.93	0.7773	02.488	0.7255	0.4256	0.3214	0.3733	-0.0383	-0.0711	0.0056	0.0520	09.724	133.98	087
08.19	0.8337	02.543	0.7792	0.4378	0.3223	0.3742	-0.0356	-0.0565	0.0059	0.0520	09.266	133.98	088
08.40	0.8763	02.613	0.8201	0.4447	0.3201	0.3736	-0.0359	-0.0572	0.0060	0.0535	09.061	134.32	089
08.66	0.9248	02.683	0.8662	0.4546	0.3190	0.3739	-0.0400	-0.0441	0.0067	0.0549	08.815	134.32	090
08.89	0.9735	02.753	0.9120	0.4690	0.3223	0.3758	-0.0368	-0.0590	0.0062	0.0535	08.591	134.32	091
09.15	1.0218	02.823	0.9575	0.4811	0.3226	0.3761	-0.0439	-0.0545	0.0071	0.0535	08.392	134.32	092
09.38	1.0702	02.884	1.0024	0.4981	0.3280	0.3800	-0.0371	-0.0619	0.0070	0.0520	08.186	134.32	093
09.59	1.1189	02.928	1.0491	0.5074	0.3256	0.3791	-0.0409	-0.0636	0.0077	0.0535	07.950	134.32	094
09.74	1.1594	03.005	1.0872	0.5194	0.3280	0.3815	-0.0375	-0.0572	0.0075	0.0535	07.873	134.32	095
09.94	1.2045	03.031	1.1299	0.5302	0.3272	0.3807	-0.0449	-0.0443	0.0070	0.0535	07.646	134.32	096
10.09	1.2377	03.106	1.1610	0.5406	0.3288	0.3823	-0.0376	-0.0742	0.0082	0.0535	07.624	134.32	097
10.26	1.2789	03.124	1.2000	0.5509	0.3284	0.3818	-0.0452	-0.0391	0.0081	0.0535	07.420	134.32	098
10.38	1.2975	03.179	1.2168	0.5586	0.3302	0.3822	-0.0378	-0.0683	0.0075	0.0520	07.443	134.67	099
10.52	1.3351	03.196	1.2521	0.5694	0.3311	0.3831	-0.0347	-0.0609	0.0080	0.0520	07.272	134.67	100
10.67	1.3606	03.251	1.2757	0.5781	0.3320	0.3840	-0.0347	-0.0694	0.0083	0.0520	07.259	134.32	101
10.84	1.4054	03.286	1.3177	0.5915	0.3331	0.3851	-0.0352	-0.0482	0.0086	0.0520	07.104	134.32	102
11.01	1.4390	03.336	1.3489	0.6019	0.3332	0.3852	-0.0386	-0.0643	0.0073	0.0520	07.042	134.32	103
11.27	1.4833	03.405	1.3895	0.6173	0.3338	0.3872	-0.0319	-0.0574	0.0080	0.0535	06.973	134.32	104
11.42	1.5246	03.431	1.4281	0.6299	0.3346	0.3866	-0.0358	-0.0440	0.0085	0.0520	06.836	134.32	105
11.52	1.5464	03.478	1.4482	0.6375	0.3355	0.3875	-0.0356	-0.0523	0.0079	0.0520	06.833	134.67	106
11.58	1.5772	03.501	1.4772	0.6479	0.3382	0.3902	-0.0360	-0.0528	0.0088	0.0520	06.743	133.98	107

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 — HSWT TEST 89

RUN 019 MACH NO 3.980 RN/L 11526396 Q 1454 PSF TO 590 — 10/17/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
11.51	1.2279	02.735	0.7412	2.4933	2.2930	0.3017	-0.0223	-0.0518	0.0064	-1.9913	06.766	173.27	108
11.54	1.5953	03.522	1.4946	0.6514	0.3364	0.3898	-0.0256	-0.0516	0.0093	0.0535	06.707	134.32	109
00.16	0.0344	00.032	0.0335	0.3074	0.3073	0.3549	-0.0138	-0.0613	-0.0026	0.0476	02.820	134.32	110

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 HSWT TEST 89

RUN 020 MACH NO 3.980 RN/L 11740779 Q 1451 PSF TO 583

10/17/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
00.26	0.0038	00.043	0.0022	0.3662	0.3661	0.4211	-0.0034	-0.0378	0.0003	0.0549	34.021	134.32	007
-11.65	-2.1687	-00.957	-2.0476	0.8086	0.3783	0.4406	0.0656	-0.0076	-0.0077	0.0623	01.341	134.32	008
-11.68	-2.1796	-00.968	-2.0575	0.813.	0.3795	0.4418	0.0660	-0.0222	-0.0069	0.0623	01.349	134.32	009
-11.58	-2.1685	-00.966	-2.0479	0.8085	0.3811	0.4418	0.0725	-0.0136	-0.0077	0.0608	01.353	134.32	010
-11.27	-2.1064	-00.945	-1.9922	0.7810	0.3765	0.4388	0.0645	-0.0157	-0.0083	0.0623	01.363	133.98	011
-10.85	-2.0032	-00.913	-1.8971	0.7439	0.3734	0.4356	0.0624	-0.0315	-0.0075	0.0623	01.385	134.32	012
-10.38	-1.8907	-00.889	-1.7936	0.7017	0.3671	0.4293	0.0495	-0.0124	-0.0078	0.0623	01.428	134.32	013
-09.94	-1.7776	-00.873	-1.6867	0.6732	0.3721	0.4329	0.0543	-0.0341	-0.0071	0.0608	01.492	134.32	014
-09.46	-1.6615	-00.831	-1.5782	0.6371	0.3690	0.4298	0.0518	-0.0354	-0.0072	0.0608	01.519	134.32	015
-08.99	-1.5494	-00.781	-1.4729	0.6049	0.3674	0.4281	0.0459	-0.0300	-0.0071	0.0608	01.532	134.32	016
-08.51	-1.4266	-00.703	-1.3569	0.5717	0.3646	0.4254	0.0397	-0.0323	-0.0074	0.0608	01.498	134.67	017
-08.04	-1.3223	-00.631	-1.2582	0.5468	0.3655	0.4277	0.0269	-0.0287	-0.0069	0.0623	01.449	134.32	018
-07.58	-1.2146	-00.549	-1.1559	0.5218	0.3648	0.4256	0.0313	-0.0364	-0.0070	0.0608	01.373	134.32	019
-07.12	-1.1018	-00.507	-1.0483	0.4971	0.3633	0.4241	0.0224	-0.0390	-0.0066	0.0608	01.399	134.32	020
-06.69	-1.0063	-00.437	-0.9568	0.4809	0.3661	0.4269	0.0179	-0.0336	-0.0055	0.0608	01.319	133.98	021
-06.24	-0.9054	-00.381	-0.8602	0.4626	0.3665	0.4258	0.0168	-0.0347	-0.0055	0.0593	01.278	134.32	022
-05.76	-0.8223	-00.321	-0.7818	0.4431	0.3625	0.4233	0.0196	-0.0425	-0.0057	0.0608	01.186	134.32	023
-05.33	-0.7426	-00.287	-0.7058	0.4292	0.3618	0.4211	0.0151	-0.0366	-0.0046	0.0593	01.174	134.32	024
-04.82	-0.6664	-00.263	-0.6337	0.4152	0.3604	0.4197	0.0145	-0.0520	-0.0038	0.0593	01.197	134.32	025
-04.34	-0.6019	-00.232	-0.5728	0.4067	0.3621	0.4200	0.0068	-0.0393	-0.0042	0.0579	01.170	134.32	026
-03.87	-0.5332	-00.209	-0.5075	0.3972	0.3620	0.4184	0.0061	-0.0547	-0.0024	0.0564	01.191	134.32	027
-03.47	-0.4725	-00.188	-0.4499	0.3872	0.3593	0.4171	0.0055	-0.0480	-0.0029	0.0579	01.206	134.32	028
-03.01	-0.4112	-00.183	-0.3918	0.3817	0.3606	0.4155	0.0048	-0.0485	-0.0020	0.0549	01.353	134.32	029
-02.52	-0.3544	-00.162	-0.3382	0.3769	0.3616	0.4165	0.0046	-0.0631	-0.0020	0.0549	01.389	134.32	030
-02.09	-0.3020	-00.149	-0.2886	0.3703	0.3595	0.4144	0.0081	-0.0689	-0.0021	0.0549	01.504	134.32	031
-01.69	-0.2504	-00.120	-0.2396	0.3692	0.3620	0.4169	0.0046	-0.0690	-0.0023	0.0549	01.460	133.98	032
-01.22	-0.2016	-00.083	-0.1939	0.3643	0.3601	0.4165	0.0010	-0.0540	-0.0015	0.0564	01.245	134.32	033
-00.79	-0.1494	-00.061	-0.1443	0.3665	0.3645	0.4179	0.0043	-0.0452	-0.0008	0.0535	01.249	134.32	034
-00.34	-0.1051	-00.017	-0.1029	0.3643	0.3636	0.4186	0.0043	-0.0372	-0.0003	0.0549	00.480	134.32	035
00.10	-0.0567	00.004	-0.0574	0.3646	0.3647	0.4196	0.0041	-0.0217	0.0007	0.0549	-00.209	134.32	036
00.53	-0.0114	00.048	-0.0149	0.3669	0.3670	0.4204	0.0035	-0.0293	0.0003	0.0535	-12.693	134.32	037
00.99	0.0418	00.093	0.0355	0.3667	0.3660	0.4210	-0.0048	-0.0460	0.0007	0.0549	06.750	134.32	038
01.45	0.0873	00.128	0.0780	0.3672	0.3651	0.4200	-0.0027	-0.0389	0.0021	0.0549	04.467	134.32	039
01.88	0.1367	00.156	0.1245	0.3719	0.3676	0.4210	-0.0111	-0.0331	0.0011	0.0535	03.469	134.32	040
02.36	0.1863	00.184	0.1710	0.3754	0.3680	0.4215	-0.0124	-0.0484	0.0019	0.0535	02.994	134.32	041
02.79	0.2396	00.204	0.2215	0.3773	0.3661	0.4210	-0.0138	-0.0490	0.0027	0.0549	02.583	134.32	042
03.24	0.2967	00.216	0.2754	0.3852	0.3690	0.4225	-0.0119	-0.0414	0.0023	0.0535	02.215	134.32	043
03.66	0.3537	00.237	0.3293	0.3925	0.3707	0.4256	-0.0135	-0.0345	0.0026	0.0549	02.038	134.32	044
04.11	0.4175	00.242	0.3895	0.4034	0.3744	0.4279	-0.0150	-0.0347	0.0025	0.0535	01.764	134.67	045
04.54	0.4794	00.265	0.4483	0.4107	0.3739	0.4289	-0.0166	-0.0354	0.0032	0.0549	01.678	134.32	046
05.01	0.5516	00.297	0.5167	0.4225	0.3757	0.4306	-0.0220	-0.0366	0.0029	0.0549	01.638	134.32	047
05.46	0.6277	00.322	0.5888	0.4375	0.3795	0.4344	-0.0203	-0.0439	0.0025	0.0549	01.560	134.32	048
05.97	0.7055	00.373	0.6622	0.4514	0.3802	0.4351	-0.0224	-0.0448	0.0033	0.0549	01.604	134.67	049
06.42	0.7918	00.417	0.7442	0.4675	0.3814	0.4378	-0.0207	-0.0381	0.0030	0.0564	01.599	134.67	050
06.90	0.8780	00.478	0.8258	0.4846	0.3819	0.4383	-0.0329	-0.0269	0.0032	0.0564	01.653	134.67	051
07.38	0.9833	00.535	0.9261	0.5050	0.3818	0.4397	-0.0384	-0.0291	0.0038	0.0579	01.651	134.67	052
07.87	1.0962	00.601	1.0331	0.5312	0.3847	0.4411	-0.0335	-0.0516	0.0037	0.0564	01.666	134.67	053
08.33	1.2082	00.652	1.1390	0.5603	0.3894	0.4443	-0.0381	-0.0317	0.0049	0.0549	01.639	134.32	054
08.80	1.3210	00.727	1.2458	0.5872	0.3898	0.4462	-0.0320	-0.0321	0.0053	0.0564	01.673	134.32	055
09.26	1.4341	00.794	1.3524	0.6171	0.3915	0.4479	-0.0328	-0.0409	0.0058	0.0564	01.682	134.32	056
09.66	1.5395	00.851	1.4516	0.6463	0.3935	0.4499	-0.0441	-0.0223	0.0074	0.0564	01.680	134.32	057

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 HSWT TEST 89

RUN 020 MACH NO 3.980 RN/L 11740779 Q 1451 PSF TO 583

10/17/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
09.98	1.6257	00.894	1.5328	0.6699	0.3941	0.4491	-0.0344	-0.0214	0.0072	0.0549	01.671	134.67	058
10.24	1.7093	00.914	1.6114	0.6950	0.3974	0.4538	-0.0387	-0.0153	0.0074	0.0564	01.624	134.32	059
10.50	1.7811	00.938	1.6783	0.7182	0.4003	0.4552	-0.0427	-0.0168	0.0089	0.0549	01.600	134.32	060
10.95	1.8822	00.950	1.7719	0.7499	0.3995	0.4544	-0.0364	-0.0164	0.0084	0.0549	01.533	134.67	061
11.28	1.9765	00.962	1.8594	0.7823	0.4035	0.4585	-0.0408	-0.0031	0.0090	0.0549	01.479	134.67	062
11.43	2.0218	00.981	1.9016	0.7970	0.4044	0.4594	-0.0376	-0.0176	0.0092	0.0549	01.473	134.67	063
00.19	0.0341	00.049	0.0329	0.3686	0.3685	0.4234	-0.0041	-0.0380	0.0003	0.0549	04.358	134.67	064

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 HSWT TEST 89

RUN 021 MACH NO 3.980 RN/L 11359327 Q 1451 PSF TO 595

10/17/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
-11.64	-2.1699	-00.883	-2.0470	0.8175	0.3876	0.4484	0.0950	-0.2028	0.1342	0.0608	01.236	133.98	008
-11.40	-2.1230	-00.872	-2.0044	0.8001	0.3881	0.4475	0.0834	-0.1897	0.1340	0.0593	01.247	134.32	009
-11.01	-2.0405	-00.854	-1.9295	0.7672	0.3845	0.4453	0.0816	-0.1899	0.1322	0.0608	01.271	134.32	010
-10.60	-1.9522	-00.827	-1.8483	0.7362	0.3838	0.4431	0.0761	-0.1693	0.1309	0.0593	01.286	133.98	011
-10.15	-1.8281	-00.808	-1.7325	0.6963	0.3802	0.4410	0.0664	-0.1489	0.1299	0.0608	01.342	133.98	012
-09.64	-1.7041	-00.772	-1.6168	0.6574	0.3772	0.4380	0.0569	-0.1508	0.1294	0.0608	01.377	133.98	013
-09.19	-1.5885	-00.713	-1.5078	0.6265	0.3775	0.4369	0.0540	-0.1299	0.1297	0.0593	01.363	133.98	014
-08.72	-1.4689	-00.661	-1.3949	0.5946	0.3763	0.4356	0.0478	-0.1168	0.1303	0.0593	01.367	133.98	015
-08.24	-1.3648	-00.596	-1.2972	0.5648	0.3730	0.4338	0.0382	-0.0898	0.1307	0.0608	01.326	133.98	016
-07.78	-1.2495	-00.536	-1.1876	0.5376	0.3718	0.4325	0.0321	-0.0911	0.1300	0.0608	01.303	134.32	017
-07.35	-1.1416	-00.470	-1.0847	0.5147	0.3717	0.4310	0.0296	-0.0775	0.1300	0.0593	01.251	134.32	018
-06.89	-1.0358	-00.413	-0.9837	0.4935	0.3719	0.4312	0.0182	-0.0800	0.1293	0.0593	01.212	134.32	019
-06.44	-0.9418	-00.350	-0.8941	0.4752	0.3720	0.4313	0.0206	-0.0653	0.1278	0.0593	01.130	134.32	020
-05.98	-0.8547	-00.314	-0.8114	0.4585	0.3715	0.4308	0.0127	-0.0597	0.1278	0.0593	01.117	134.32	021
-05.49	-0.7793	-00.247	-0.7405	0.4412	0.3683	0.4276	0.0122	-0.0895	0.1261	0.0593	00.965	134.32	022
-05.04	-0.6960	-00.229	-0.6608	0.4295	0.3698	0.4292	0.0147	-0.0745	0.1254	0.0593	01.000	134.32	023
-04.56	-0.6316	-00.198	-0.6002	0.4188	0.3697	0.4276	0.0141	-0.0820	0.1241	0.0579	00.953	134.32	024
-04.08	-0.5493	-00.181	-0.5216	0.4081	0.3699	0.4263	0.0135	-0.0970	0.1235	0.0564	00.998	133.98	025
-03.65	-0.4948	-00.168	-0.4704	0.3980	0.3672	0.4236	0.0128	-0.0820	0.1214	0.0564	01.033	134.32	026
-03.20	-0.4412	-00.165	-0.4201	0.3905	0.3665	0.4214	0.0159	-0.1035	0.1212	0.0549	01.138	134.32	027
-02.71	-0.3880	-00.154	-0.3702	0.3839	0.3660	0.4209	0.0119	-0.1041	0.1201	0.0549	01.203	134.32	028
-02.31	-0.3235	-00.148	-0.3083	0.3823	0.3696	0.4230	0.0077	-0.0976	0.1203	0.0535	01.389	134.32	029
-01.88	-0.2744	-00.129	-0.2622	0.3746	0.3658	0.4207	0.0072	-0.0980	0.1212	0.0549	01.425	134.32	030
-01.43	-0.2211	-00.100	-0.2119	0.3743	0.3690	0.4224	-0.0003	-0.0848	0.1213	0.0535	01.373	134.67	031
-00.95	-0.1768	-00.065	-0.1706	0.3735	0.3706	0.4241	0.0026	-0.0777	0.1231	0.0535	01.116	134.32	032
-00.53	-0.1279	-00.037	-0.1244	0.3712	0.3701	0.4235	0.0020	-0.0708	0.1236	0.0535	00.886	134.32	033
-00.11	-0.0790	-00.010	-0.0783	0.3699	0.3697	0.4246	0.0015	-0.0639	0.1240	0.0549	00.370	134.32	034
00.35	-0.0264	00.027	-0.0286	0.3722	0.3724	0.4259	-0.0063	-0.0439	0.1258	0.0535	-03.165	134.32	035
00.80	0.0150	00.062	0.0098	0.3744	0.3742	0.4277	-0.0111	-0.0303	0.1249	0.0534	12.584	133.98	036
01.26	0.0641	00.090	0.0559	0.3752	0.3739	0.4273	-0.0124	-0.0309	0.1254	0.0535	04.247	134.32	037
01.72	0.1130	00.134	0.1018	0.3762	0.3730	0.4264	-0.0139	-0.0315	0.1244	0.0535	03.603	134.32	038
02.15	0.1654	00.154	0.1513	0.3792	0.3733	0.4267	-0.0154	-0.0172	0.1240	0.0535	02.825	134.67	039
02.60	0.2184	00.174	0.2012	0.3838	0.3743	0.4278	-0.0203	-0.0180	0.1227	0.0535	02.418	134.67	040
03.02	0.2643	00.201	0.2441	0.3896	0.3762	0.4297	-0.0216	-0.0187	0.1238	0.0535	02.311	134.32	041
03.47	0.3204	00.205	0.2970	0.3952	0.3765	0.4299	-0.0265	-0.0123	0.1245	0.0535	01.940	134.67	042
03.90	0.3810	00.218	0.3543	0.4047	0.3797	0.4331	-0.0245	-0.0195	0.1250	0.0535	01.736	134.67	043
04.37	0.4453	00.232	0.4151	0.4124	0.3795	0.4345	-0.0296	-0.0208	0.1264	0.0549	01.581	134.67	044
04.81	0.5109	00.246	0.4770	0.4239	0.3824	0.4373	-0.0279	-0.0209	0.1286	0.0549	01.466	134.32	045
05.28	0.5831	00.270	0.5452	0.4360	0.3840	0.4389	-0.0295	-0.0365	0.1311	0.0549	01.409	134.32	046
05.73	0.6548	00.303	0.6130	0.4495	0.3860	0.4409	-0.0350	-0.0234	0.1326	0.0549	01.407	134.32	047
06.18	0.7418	00.331	0.6958	0.4647	0.3871	0.4435	-0.0334	-0.0239	0.1344	0.0564	01.354	134.32	048
06.66	0.8341	00.394	0.7830	0.4861	0.3920	0.4469	-0.0318	-0.0252	0.1359	0.0549	01.434	133.98	049
07.15	0.9262	00.447	0.8703	0.5038	0.3916	0.4480	-0.0405	-0.0282	0.1377	0.0564	01.466	134.32	050
07.63	1.0279	00.495	0.9667	0.5256	0.3926	0.4476	-0.0425	-0.0224	0.1381	0.0549	01.462	134.32	051
08.09	1.1408	00.545	1.0741	0.5499	0.3933	0.4497	-0.0447	-0.0019	0.1384	0.0564	01.451	134.32	052
08.58	1.2575	00.613	1.1845	0.5783	0.3951	0.4515	-0.0492	0.0106	0.1391	0.0564	01.480	134.32	053
09.04	1.3665	00.687	1.2869	0.6080	0.3982	0.4532	-0.0536	0.0230	0.1399	0.0549	01.528	134.32	054
09.47	1.4719	00.735	1.3865	0.6344	0.3976	0.4540	-0.0578	0.0355	0.1411	0.0564	01.516	134.67	055
09.82	1.5696	00.773	1.4782	0.6632	0.4014	0.4563	-0.0658	0.0628	0.1398	0.0549	01.497	134.67	056
10.11	1.6490	00.809	1.5525	0.6872	0.4041	0.4590	-0.0632	0.0700	0.1408	0.0549	01.490	134.32	057
10.39	1.7281	00.826	1.6268	0.7097	0.4045	0.4595	-0.0641	0.0986	0.1408	0.0549	01.453	134.32	058

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 HSWT TEST 89

RUN 021 MACH NO 3.980 RN/L 11359327 Q 1451 PSF TO 595

10/17/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
10.76	1.8148	00.854	1.7071	0.7377	0.4059	0.4594	-0.0684	0.1188	0.1428	0.0535	01.430	134.32	059
11.17	1.9247	00.870	1.8091	0.7734	0.4083	0.4632	-0.0727	0.1172	0.1443	0.0549	01.373	134.32	060
11.35	1.9964	00.885	1.8761	0.7971	0.4121	0.4656	-0.0666	0.1326	0.1447	0.0535	01.347	134.32	061
11.39	2.0252	00.891	1.9039	0.8041	0.4122	0.4657	-0.0667	0.1321	0.1443	0.0535	01.336	134.67	062
11.48	2.0493	00.897	1.9262	0.8119	0.4123	0.4673	-0.0741	0.1456	0.1451	0.0549	01.330	134.32	063
11.51	2.0532	00.898	1.9294	0.8149	0.4136	0.4671	-0.0774	0.1375	0.1454	0.0535	01.329	134.32	064
00.19	0.0418	00.034	0.0406	0.3757	0.3756	0.4290	-0.0075	-0.0367	0.1250	0.0535	02.466	134.67	065

CVQ HIGH SPEED WIND TUNNEL TEST NUMBER 89 — HSWT TEST 89

RUN 022 MACH NO 4.970 RN/L 16456655 Q 1465 PSF TQ 594 — 10/23/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
00.27	0.0396	00.180	0.0579	0.3632	0.3629	0.4048	-0.0013	0.1853	0.1065	0.0419	09.174	301.33	006
-11.35	-1.9894	-00.937	-1.8765	0.7606	0.3766	0.4214	0.0486	-0.0564	0.1415	0.0448	01.431	300.63	007
-10.91	-1.9005	-00.928	-1.7956	0.7257	0.3728	0.4176	0.1411	-0.2425	0.1330	0.0448	01.483	300.98	008
-10.44	-1.8085	-00.883	-1.7114	0.6921	0.3706	0.4154	0.1390	-0.2289	0.1320	0.0448	01.483	300.98	009
-10.00	-1.7100	-00.878	-1.6202	0.6593	0.3680	0.4128	0.1304	-0.2163	0.1307	0.0448	01.560	300.63	010
-09.59	-1.5970	-00.861	-1.5142	0.6252	0.3652	0.4100	0.1105	-0.1688	0.1289	0.0448	01.638	300.98	011
-09.06	-1.4984	-00.848	-1.4224	0.5950	0.3635	0.4069	0.1052	-0.1631	0.1282	0.0433	01.720	300.63	012
-08.65	-1.4025	-00.819	-1.3320	0.5693	0.3625	0.4073	0.0993	-0.1206	0.1270	0.0448	01.773	300.63	013
-08.16	-1.3095	-00.815	-1.2450	0.5429	0.3606	0.4054	0.0871	-0.0939	0.1263	0.0448	01.890	300.63	014
-07.71	-1.2170	-00.778	-1.1577	0.5200	0.3599	0.4047	0.0749	-0.0822	0.1255	0.0448	01.941	300.63	015
-07.26	-1.1258	-00.741	-1.0713	0.4987	0.3593	0.4027	0.0732	-0.0910	0.1277	0.0434	02.001	300.29	016
-06.84	-1.0403	-00.688	-0.9898	0.4832	0.3619	0.4053	0.0604	-0.0352	0.1251	0.0433	02.011	300.63	017
-06.34	-0.9431	-00.650	-0.8976	0.4621	0.3602	0.4036	0.0421	-0.0027	0.1243	0.0433	02.094	300.63	018
-05.91	-0.8571	-00.606	-0.8153	0.4481	0.3617	0.4050	0.0380	-0.0041	0.1232	0.0433	02.148	300.63	019
-05.46	-0.7672	-00.578	-0.7293	0.4333	0.3620	0.4053	0.0370	0.0104	0.1196	0.0433	02.289	300.63	020
-04.97	-0.6883	-00.544	-0.6547	0.4159	0.3576	0.4009	0.0368	-0.0122	0.1182	0.0433	02.402	300.63	021
-04.49	-0.6169	-00.495	-0.5869	0.4068	0.3596	0.4030	0.0359	0.0093	0.1150	0.0433	02.436	300.98	022
-04.04	-0.5501	-00.464	-0.5231	0.4014	0.3635	0.4054	0.0287	0.0002	0.1133	0.0419	02.560	300.63	023
-03.58	-0.4903	-00.417	-0.4667	0.3931	0.3632	0.4051	0.0251	-0.0085	0.1117	0.0419	02.584	300.63	024
-03.09	-0.4227	-00.386	-0.4026	0.3838	0.3616	0.4035	0.0317	-0.0296	0.1099	0.0419	02.772	300.63	025
-02.65	-0.3591	-00.347	-0.3420	0.3781	0.3619	0.4038	0.0275	-0.0232	0.1083	0.0419	02.932	300.63	026
-02.19	-0.3026	-00.317	-0.2885	0.3728	0.3615	0.4019	0.0229	-0.0157	0.1075	0.0404	03.187	300.63	027
-01.76	-0.2468	-00.247	-0.2356	0.3687	0.3613	0.4032	0.0183	-0.0089	0.1077	0.0419	03.036	300.63	028
-01.33	-0.1908	-00.184	-0.1822	0.3699	0.3656	0.4061	0.0139	-0.0096	0.1091	0.0404	02.932	300.63	029
-00.85	-0.1460	-00.116	-0.1406	0.3663	0.3642	0.4046	0.0130	-0.0168	0.1103	0.0404	02.409	300.63	030
-00.42	-0.0977	-00.055	-0.0951	0.3598	0.3591	0.3995	0.0050	-0.0033	0.1108	0.0404	01.708	300.29	031
00.04	-0.0338	00.009	-0.0341	0.3582	0.3582	0.3987	0.0040	-0.0177	0.1115	0.0404	-00.816	300.63	032
00.47	0.0101	00.095	0.0072	0.3592	0.3591	0.3996	-0.0001	-0.0125	0.1119	0.0404	28.419	300.29	033
00.90	0.0613	00.157	0.0556	0.3644	0.3635	0.4039	-0.0015	0.0301	0.1110	0.0404	07.760	300.63	034
01.37	0.1093	00.218	0.1006	0.3695	0.3670	0.4060	-0.0056	0.0281	0.1108	0.0390	06.059	300.63	035
01.83	0.1610	00.289	0.1493	0.3694	0.3644	0.4049	-0.0064	0.0266	0.1108	0.0404	05.445	300.63	036
02.32	0.2166	00.335	0.2016	0.3751	0.3667	0.4057	-0.0107	0.0320	0.1111	0.0390	04.698	300.63	037
02.74	0.2687	00.381	0.2509	0.3775	0.3650	0.4055	-0.0046	0.0320	0.1125	0.0404	04.303	300.29	038
03.20	0.3278	00.411	0.3069	0.3837	0.3660	0.4064	-0.0125	0.0514	0.1133	0.0404	03.806	300.63	039
03.62	0.3914	00.442	0.3674	0.3927	0.3687	0.4091	-0.0131	0.0281	0.1154	0.0404	03.430	300.63	040
04.08	0.4512	00.472	0.4237	0.4008	0.3697	0.4101	-0.0103	0.0129	0.1165	0.0404	03.179	300.63	041
04.56	0.5218	00.505	0.4908	0.4101	0.3697	0.4102	-0.0115	0.0262	0.1173	0.0404	02.941	300.63	042
05.01	0.5963	00.530	0.5616	0.4227	0.3721	0.4125	-0.0129	0.0469	0.1195	0.0404	02.702	300.63	043
05.43	0.6749	00.565	0.6369	0.4316	0.3694	0.4113	-0.0139	0.0310	0.1203	0.0419	02.543	300.63	044
05.93	0.7608	00.585	0.7183	0.4485	0.3718	0.4137	-0.0256	0.0497	0.1218	0.0419	02.336	300.63	045
06.39	0.8477	00.620	0.8008	0.4668	0.3749	0.4153	-0.0245	0.0640	0.1239	0.0404	02.223	300.29	046
06.87	0.9491	00.633	0.8974	0.4859	0.3752	0.4156	-0.0272	0.0853	0.1242	0.0404	02.028	300.29	047
07.34	1.0315	00.676	0.9752	0.5031	0.3743	0.4162	-0.0328	0.0911	0.1244	0.0419	01.991	300.29	048
07.82	1.1313	00.705	1.0694	0.5276	0.3771	0.4176	-0.0311	0.1130	0.1249	0.0404	01.893	300.63	049
08.28	1.2325	00.718	1.1653	0.5512	0.3777	0.4181	-0.0431	0.1472	0.1256	0.0404	01.770	300.63	050
08.76	1.3352	00.740	1.2623	0.5758	0.3769	0.4188	-0.0413	0.1622	0.1259	0.0419	01.685	300.29	051
09.23	1.4426	00.746	1.3624	0.6098	0.3833	0.4237	-0.0462	0.1753	0.1282	0.0404	01.571	300.63	052
09.60	1.5362	00.758	1.4501	0.6382	0.3873	0.4278	-0.0444	0.2046	0.1301	0.0404	01.498	300.63	053
09.92	1.6227	00.768	1.5311	0.6645	0.3909	0.4313	-0.0455	0.2041	0.1319	0.0404	01.437	300.63	054
10.20	1.6940	00.783	1.5972	0.6891	0.3953	0.4343	-0.0464	0.2034	0.1345	0.0390	01.404	300.63	055
10.48	1.7639	00.781	1.6628	0.7083	0.3939	0.4344	-0.0438	0.1964	0.1370	0.0404	01.346	300.29	056

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 HSWT TEST 89

RUN 022 MACH NO 4.970 RN/L 16456655 Q 1465 PSF TO 594

10/23/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
10.82	1.8442	00.790	1.7368	0.7364	0.3972	0.4376	-0.0555	0.2376	0.1388	0.0404	01.301	300.63	057
11.25	1.9379	00.810	1.8217	0.7753	0.4050	0.4425	-0.0535	0.2446	0.1421	0.0375	01.269	300.63	058
11.40	1.9945	00.788	1.8750	0.7918	0.4055	0.4445	-0.0577	0.2585	0.1436	0.0390	01.201	300.63	059
11.47	2.0249	00.803	1.9030	0.8022	0.4079	0.4469	-0.0546	0.2515	0.1442	0.0390	01.205	300.63	060
11.49	2.0380	00.798	1.9152	0.8085	0.4107	0.4482	-0.0551	0.2737	0.1449	0.0375	01.190	300.29	061
11.50	2.0432	00.799	1.9211	0.8063	0.4072	0.4461	-0.0515	0.2594	0.1449	0.0390	01.188	300.63	062
11.53	2.0609	00.770	1.9381	0.8103	0.4068	0.4443	-0.0553	0.2740	0.1448	0.0375	01.135	300.29	063
11.45	2.0639	00.962	1.9406	0.8155	0.4142	0.4445	-0.0346	0.2521	0.1538	0.0303	01.416	300.63	064
00.11	0.0377	00.050	0.0370	0.3591	0.3590	0.3995	-0.0108	-0.0430	0.1147	0.0404	03.996	300.29	065

CVG HIGH SPEED WIND TUNNEL TEST NUMBER 89 — HSWT TEST 89

RUN 023 MACH NO 4.970 RN/L 16106908 Q 1465 PSF TO 602 — 10/23/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
00.29	0.0486	00.044	0.0467	0.3636	0.3634	0.4067	0.0197	-0.0480	0.0018	0.0433	02.728	300.63	006
-11.43	-1.9273	-00.942	-1.8184	0.7319	0.3570	0.4018	0.0970	-0.0081	0.0019	0.0448	01.484	300.63	007
-11.19	-1.8938	-00.951	-1.7900	0.7104	0.3495	0.3973	0.0857	0.0195	0.0012	0.0477	01.525	300.63	008
-10.80	-1.8181	-00.926	-1.7202	0.6851	0.3505	0.3968	0.0808	0.0112	0.0014	0.0463	01.548	300.29	009
-10.37	-1.7326	-00.916	-1.6414	0.6559	0.3498	0.3961	0.0755	0.0106	0.0001	0.0463	01.606	300.29	010
-09.90	-1.6358	-00.911	-1.5516	0.6241	0.3479	0.3942	0.0666	0.0166	-0.0008	0.0463	01.693	300.29	011
-09.46	-1.5300	-00.896	-1.4528	0.5895	0.3427	0.3889	0.0642	0.0164	-0.0010	0.0463	01.779	300.63	012
-09.00	-1.4254	-00.906	-1.3546	0.5596	0.3409	0.3857	0.0622	0.0092	-0.0015	0.0448	01.932	300.63	013
-08.53	-1.3368	-00.870	-1.2718	0.5330	0.3384	0.3832	0.0532	0.0148	-0.0016	0.0448	01.977	300.63	014
-08.07	-1.2377	-00.866	-1.1778	0.5092	0.3387	0.3849	0.0513	0.0001	-0.0018	0.0463	02.125	300.29	015
-07.65	-1.1437	-00.836	-1.0886	0.4869	0.3376	0.3839	0.0528	-0.0142	-0.0025	0.0463	02.221	300.63	016
-07.17	-1.0592	-00.776	-1.0085	0.4687	0.3391	0.3839	0.0473	-0.0229	-0.0016	0.0448	02.225	300.63	017
-06.75	-0.9701	-00.731	-0.9237	0.4498	0.3382	0.3830	0.0425	-0.0460	-0.0014	0.0448	02.290	300.63	018
-06.30	-0.8836	-00.678	-0.8412	0.4325	0.3376	0.3839	0.0344	-0.0257	-0.0023	0.0462	02.331	300.98	019
-05.82	-0.7993	-00.660	-0.7567	0.4186	0.3397	0.3860	0.0335	-0.0404	-0.0015	0.0463	02.521	300.29	020
-05.34	-0.7209	-00.610	-0.6861	0.4057	0.3401	0.3849	0.0361	-0.0400	-0.0021	0.0448	02.572	300.29	021
-04.86	-0.6413	-00.584	-0.6102	0.3936	0.3405	0.3853	0.0318	-0.0407	-0.0015	0.0448	02.766	300.63	022
-04.40	-0.5698	-00.543	-0.5421	0.3818	0.3390	0.3838	0.0341	-0.0403	-0.0013	0.0448	02.894	300.98	023
-03.93	-0.4997	-00.494	-0.4753	0.3715	0.3381	0.3829	0.0333	-0.0479	-0.0009	0.0448	03.006	300.63	024
-03.49	-0.4446	-00.449	-0.4229	0.3677	0.3413	0.3832	0.0327	-0.0482	-0.0018	0.0419	03.071	300.29	025
-03.00	-0.3768	-00.409	-0.3585	0.3600	0.3407	0.3826	0.0285	-0.0564	-0.0016	0.0419	03.297	300.63	026
-02.57	-0.3243	-00.373	-0.3087	0.3547	0.3406	0.3824	0.0246	-0.0431	-0.0009	0.0419	03.493	300.63	027
-02.13	-0.2712	-00.321	-0.2583	0.3514	0.3415	0.3820	0.0246	-0.0520	-0.0005	0.0404	03.593	300.63	028
-01.67	-0.2188	-00.261	-0.2087	0.3479	0.3417	0.3821	0.0243	-0.0319	-0.0001	0.0404	03.619	300.29	029
-01.22	-0.1576	-00.215	-0.1503	0.3442	0.3410	0.3828	0.0245	-0.0555	0.0003	0.0419	04.144	300.63	030
-00.77	-0.1163	-00.149	-0.1116	0.3462	0.3447	0.3851	0.0211	-0.0435	0.0009	0.0404	03.885	300.63	031
-00.34	-0.0630	-00.113	-0.0610	0.3447	0.3444	0.3848	0.0211	-0.0449	0.0009	0.0404	05.457	300.63	032
00.11	-0.0215	-00.047	-0.0221	0.3447	0.3447	0.3852	0.0213	-0.0541	0.0013	0.0404	06.661	300.63	033
00.57	0.0262	00.014	0.0228	0.3427	0.3424	0.3829	0.0169	-0.0625	0.0024	0.0404	01.615	300.29	034
01.03	0.0813	00.085	0.0751	0.3446	0.3432	0.3837	0.0152	-0.0630	0.0025	0.0404	03.182	300.29	035
01.47	0.1364	00.165	0.1275	0.3490	0.3456	0.3846	0.0099	-0.0571	0.0037	0.0390	03.672	300.29	036
01.91	0.1801	00.233	0.1685	0.3514	0.3456	0.3846	0.0085	-0.0577	0.0046	0.0390	03.937	300.63	037
02.39	0.2317	00.279	0.2171	0.3541	0.3448	0.3852	0.0035	-0.0584	0.0044	0.0404	03.655	300.63	038
02.82	0.2872	00.317	0.2698	0.3602	0.3465	0.3855	0.0086	-0.0431	0.0058	0.0390	03.354	300.29	039
03.27	0.3501	00.356	0.3295	0.3699	0.3505	0.3895	0.0036	-0.0583	0.0064	0.0390	03.090	300.63	040
03.70	0.4087	00.386	0.3851	0.3774	0.3518	0.3908	0.0018	-0.0365	0.0060	0.0390	02.870	300.98	041
04.15	0.4724	00.418	0.4457	0.3851	0.3518	0.3908	-0.0031	-0.0518	0.0066	0.0390	02.685	300.63	042
04.61	0.5351	00.457	0.5050	0.3939	0.3520	0.3925	0.0018	-0.0361	0.0062	0.0404	02.596	300.63	043
05.09	0.6086	00.499	0.5748	0.4061	0.3535	0.3939	-0.0105	-0.0236	0.0064	0.0404	02.490	300.98	044
05.54	0.6910	00.535	0.6535	0.4199	0.3549	0.3953	-0.0093	-0.0159	0.0061	0.0404	02.350	300.63	045
06.02	0.7774	00.571	0.7358	0.4357	0.3562	0.3966	-0.0115	-0.0089	0.0065	0.0404	02.233	300.29	046
06.49	0.8586	00.605	0.8127	0.4524	0.3576	0.3981	-0.0167	-0.0101	0.0062	0.0404	02.142	300.63	047
06.95	0.9548	00.634	0.9042	0.4728	0.3600	0.4004	-0.0188	-0.0107	0.0060	0.0404	02.018	300.98	048
07.43	1.0403	00.678	0.9850	0.4920	0.3605	0.4010	-0.0207	-0.0040	0.0046	0.0404	01.980	300.98	049
07.91	1.1374	00.708	1.0770	0.5131	0.3601	0.4020	-0.0183	-0.0040	0.0056	0.0419	01.890	300.98	050
08.38	1.2360	00.730	1.1698	0.5394	0.3631	0.4035	-0.0193	-0.0043	0.0055	0.0404	01.794	300.63	051
08.84	1.3407	00.736	1.2685	0.5682	0.3666	0.4056	-0.0206	0.0172	0.0058	0.0390	01.668	300.63	052
09.29	1.4344	00.756	1.3566	0.5926	0.3660	0.4064	-0.0145	-0.0037	0.0057	0.0404	01.602	300.63	053
09.66	1.5282	00.777	1.4446	0.6201	0.3690	0.4094	-0.0153	-0.0188	0.0074	0.0404	01.544	300.63	054
09.97	1.6219	00.772	1.5333	0.6451	0.3699	0.4103	-0.0164	0.0030	0.0068	0.0404	01.447	300.63	055
10.25	1.6798	00.810	1.5868	0.6650	0.3719	0.4109	-0.0168	-0.0123	0.0085	0.0390	01.466	300.29	056

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 HSWT TEST 89

RUN 023 MACH NO 4.970 RN/L 16106908 Q 1465 PSF TO 602

10/23/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
10.51	1.7552	C0.785	1.6575	0.6879	0.3741	0.4145	-0.0177	-0.0049	0.0088	0.0404	01.359	300.29	057
10.93	1.8430	C0.812	1.7376	0.7218	0.3793	0.4183	-0.0185	-0.0128	0.0101	0.0390	01.339	300.63	058
11.28	1.9314	00.823	1.8192	0.7533	0.3830	0.4220	-0.0125	-0.0191	0.0100	0.0390	01.295	300.29	059
11.37	1.9778	C0.825	1.8626	0.7699	0.3874	0.4249	-0.0200	0.0014	0.0099	0.0375	01.267	300.63	060
11.38	1.9967	00.829	1.9811	0.7729	0.3865	0.4240	-0.0167	-0.0052	0.0097	0.0375	01.262	300.63	061
11.46	2.0045	C0.814	1.8880	0.7754	0.3848	0.4238	-0.0097	-0.0257	0.0097	0.0390	01.233	300.63	062
11.44	2.0115	00.832	1.8948	0.7784	0.3871	0.4261	-0.0135	0.0026	0.0095	0.0390	01.257	300.63	063
11.25	1.9915	00.837	1.8773	0.7703	0.3894	0.4283	-0.0166	-0.0053	0.0098	0.0390	01.277	300.29	064
00.22	0.0640	00.005	0.0627	0.3498	0.3496	0.3886	0.0126	-0.0270	0.0008	0.0390	00.255	300.63	065

CVO HIGH SPEED WIND TUNNEL TEST NUMBER 89 HSWT TEST 89

RUN 024 MACH NO 4.970 RN/L 16399013 Q 1465 PSF TO 596

10/23/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
00.28	0.0470	00.144	0.0456	0.3033	0.3030	0.3377	-0.0088	0.0257	0.0015	0.0346	09.320	300.63	006
-11.58	-1.6169	-03.460	-1.5212	0.6311	0.3129	0.3562	0.1309	0.0763	0.0013	0.0434	06.501	300.29	007
-11.36	-1.5800	-03.418	-1.4880	0.6150	0.3099	0.3547	0.1279	0.0806	0.0024	0.0448	06.573	300.29	008
-11.16	-1.5431	-03.381	-1.4523	0.6009	0.3083	0.3531	0.1350	0.0800	0.0019	0.0448	06.665	300.63	009
-10.94	-1.4966	-03.337	-1.4109	0.5870	0.3086	0.3519	0.1292	0.0830	0.0017	0.0433	06.775	300.63	010
-10.72	-1.4522	-03.294	-1.3700	0.5706	0.3059	0.3507	0.1326	0.0745	0.0026	0.0448	06.892	300.63	011
-10.49	-1.4042	-03.242	-1.3252	0.5555	0.3049	0.3497	0.1263	0.0851	0.0021	0.0448	07.013	300.63	012
-10.27	-1.3652	-03.186	-1.2890	0.5435	0.3051	0.3484	0.1308	0.0683	0.0023	0.0434	07.090	300.29	013
-10.02	-1.3192	-03.148	-1.2468	0.5255	0.3005	0.3453	0.1275	0.0803	0.0012	0.0448	07.249	300.63	014
-09.77	-1.2685	-03.106	-1.1988	0.5136	0.3028	0.3461	0.1284	0.0629	0.0021	0.0434	07.439	300.29	015
-09.55	-1.2305	-03.044	-1.1636	0.5007	0.3008	0.3442	0.1253	0.0742	0.0019	0.0433	07.516	300.63	016
-09.32	-1.1864	-02.992	-1.1223	0.4874	0.2992	0.3426	0.1220	0.0641	0.0021	0.0433	07.662	300.63	017
-09.10	-1.1442	-02.944	-1.0824	0.4767	0.2996	0.3430	0.1214	0.0628	0.0021	0.0434	07.817	300.29	018
-08.87	-1.1032	-02.882	-1.0444	0.4625	0.2959	0.3407	0.1137	0.0671	0.0021	0.0448	07.936	300.63	019
-08.62	-1.0609	-02.833	-1.0042	0.4533	0.2976	0.3409	0.1062	0.0719	0.0012	0.0434	08.114	300.29	020
-08.38	-1.0171	-02.782	-0.9630	0.4422	0.2972	0.3405	0.1057	0.0556	0.0021	0.0434	08.308	300.29	021
-08.16	-0.9775	-02.714	-0.9253	0.4340	0.2983	0.3402	0.1015	0.0535	0.0010	0.0419	08.435	300.29	022
-07.94	-0.9302	-02.662	-0.8804	0.4212	0.2955	0.3388	0.0971	0.0518	0.0016	0.0434	08.693	300.29	023
-07.70	-0.8868	-02.602	-0.8392	0.4116	0.2954	0.3373	0.0925	0.0575	0.0009	0.0419	08.913	300.29	024
-07.49	-0.8582	-02.545	-0.8124	0.4044	0.2951	0.3385	0.0884	0.0559	0.0006	0.0434	09.009	300.29	025
-07.27	-0.8214	-02.475	-0.7777	0.3945	0.2928	0.3362	0.0873	0.0546	0.0015	0.0433	09.155	300.63	026
-07.03	-0.7818	-02.408	-0.7400	0.3876	0.2942	0.3375	0.0795	0.0521	0.0019	0.0433	09.356	300.63	027
-06.81	-0.7458	-02.349	-0.7056	0.3803	0.2939	0.3372	0.0784	0.0431	0.0020	0.0433	09.571	300.63	028
-06.59	-0.6987	-02.289	-0.6608	0.3701	0.2923	0.3357	0.0776	0.0428	0.0013	0.0433	09.952	300.63	029
-06.36	-0.6633	-02.241	-0.6266	0.3660	0.2944	0.3378	0.0734	0.0414	0.0011	0.0434	10.266	300.29	030
-06.10	-0.6311	-02.175	-0.5963	0.3589	0.2935	0.3354	0.0624	0.0383	0.0012	0.0419	10.472	300.29	031
-05.87	-0.5945	-02.106	-0.5614	0.3520	0.2927	0.3346	0.0650	0.0232	0.0014	0.0419	10.765	300.63	032
-05.64	-0.5592	-02.059	-0.5275	0.3485	0.2951	0.3370	0.0605	0.0437	0.0007	0.0419	11.186	300.29	033
-05.41	-0.5294	-01.989	-0.4991	0.3452	0.2967	0.3371	0.0563	0.0346	0.0009	0.0404	11.414	300.98	034
-05.15	-0.5019	-01.918	-0.4734	0.3387	0.2949	0.3368	0.0556	0.0335	0.0009	0.0419	11.612	300.63	035
-04.92	-0.4734	-01.853	-0.4463	0.3351	0.2956	0.3360	0.0515	0.0243	0.0019	0.0404	11.893	300.63	036
-04.68	-0.4415	-01.779	-0.4160	0.3293	0.2942	0.3361	0.0471	0.0447	0.0004	0.0419	12.243	300.63	037
-04.45	-0.4161	-01.706	-0.3918	0.3280	0.2965	0.3370	0.0438	0.0282	0.0020	0.0404	12.458	300.63	038
-04.19	-0.3879	-01.625	-0.3648	0.3239	0.2964	0.3368	0.0434	0.0419	0.0011	0.0404	12.736	300.63	039
-03.97	-0.3627	-01.554	-0.3410	0.3249	0.3005	0.3366	0.0400	0.0329	0.0014	0.0361	13.015	300.29	040
-03.72	-0.3370	-01.479	-0.3171	0.3178	0.2965	0.3355	0.0365	0.0238	0.0016	0.0390	13.335	300.63	041
-03.52	-0.3123	-01.408	-0.2934	0.3171	0.2985	0.3375	0.0363	0.0304	0.0003	0.0390	13.700	300.29	042
-03.28	-0.2986	-01.322	-0.2811	0.3151	0.2985	0.3361	0.0364	0.0217	0.0016	0.0375	13.445	300.29	043
-03.05	-0.2729	-01.264	-0.2565	0.3154	0.3012	0.3388	0.0327	0.0276	0.0010	0.0375	14.072	300.63	044
-02.81	-0.2559	-01.194	-0.2405	0.3129	0.3007	0.3382	0.0293	0.0262	-0.0001	0.0375	14.201	300.29	045
-02.61	-0.2338	-01.114	-0.2199	0.3100	0.2997	0.3372	0.0322	0.0261	0.0011	0.0375	14.471	300.63	046
-02.39	-0.2121	-01.042	-0.1994	0.3092	0.3006	0.3381	0.0249	0.0317	0.0011	0.0375	14.931	300.63	047
-02.16	-0.1982	-00.948	-0.1867	0.3095	0.3022	0.3383	0.0213	0.0233	0.0005	0.0361	14.529	300.63	048
-01.94	-0.1766	-00.869	-0.1663	0.3073	0.3015	0.3390	0.0209	0.0155	0.0010	0.0375	14.943	300.63	049
-01.70	-0.1631	-00.766	-0.1541	0.3082	0.3035	0.3410	0.0203	0.0295	0.0011	0.0375	14.269	300.63	050
-01.45	-0.1419	-00.687	-0.1337	0.3089	0.3054	0.3415	0.0199	0.0218	0.0016	0.0361	14.751	300.63	051
-01.23	-0.1240	-00.592	-0.1175	0.3056	0.3030	0.3405	0.0160	0.0280	0.0010	0.0375	14.496	300.63	052
-01.01	-0.1104	-00.497	-0.1050	0.3069	0.3050	0.3411	0.0120	0.0414	0.0009	0.0361	13.689	300.63	053
-00.79	-0.0888	-00.410	-0.0846	0.3050	0.3038	0.3398	0.0084	0.0255	0.0016	0.0361	14.016	300.63	054
-00.55	-0.0713	-00.315	-0.0684	0.3049	0.3043	0.3403	0.0078	0.0324	0.0012	0.0361	13.399	300.63	055
-00.31	-0.0612	-00.221	-0.0596	0.3014	0.3011	0.3386	0.0109	0.0253	0.0010	0.0375	10.974	300.63	056

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 HSWT TEST 89

RUN 024 MACH NO 4.970 RN/L 16399013 Q 1465 PSF TO 596

10/23/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
00.09	-0.0437	-00.126	-0.0433	0.3034	0.3033	0.3394	0.0106	0.0173	0.0015	0.0361	08.774	300.29	057
00.16	-0.0262	-00.031	-0.0270	0.3033	0.3034	0.3394	0.0067	0.0234	0.0018	0.0361	03.595	300.63	058
00.41	-0.0087	00.057	-0.0108	0.3023	0.3024	0.3385	0.0030	0.0288	0.0013	0.0361	-19.909	300.63	059
00.63	0.0127	00.162	0.0094	0.3013	0.3011	0.3372	0.0091	0.0139	0.0018	0.0361	38.805	300.63	060
00.86	0.0303	00.258	0.0258	0.3022	0.3018	0.3393	0.0016	0.0184	0.0019	0.0375	25.890	300.63	061
01.08	0.0478	00.363	0.0421	0.3045	0.3036	0.3397	0.0009	0.0168	0.0021	0.0361	23.037	300.63	062
01.33	0.0656	00.491	0.0585	0.3059	0.3044	0.3405	0.0002	0.0154	0.0022	0.0361	20.887	300.29	063
01.56	0.0830	00.555	0.0747	0.3052	0.3030	0.3406	-0.0040	0.0204	0.0026	0.0375	20.311	300.63	064
01.81	0.0968	00.699	0.0872	0.3062	0.3033	0.3394	-0.0012	0.0195	0.0029	0.0361	20.685	300.29	065
02.03	0.1181	00.747	0.1073	0.3094	0.3054	0.3415	-0.0055	0.0248	0.0024	0.0361	19.213	300.63	066
02.28	0.1356	00.842	0.1234	0.3087	0.3036	0.3396	-0.0026	0.0166	0.0031	0.0361	18.866	300.98	067
02.48	0.1536	00.931	0.1403	0.3109	0.3046	0.3407	-0.0067	0.0146	0.0030	0.0361	18.420	300.63	068
02.72	0.1789	01.012	0.1642	0.3135	0.3053	0.3414	-0.0074	0.0133	0.0031	0.0361	17.193	300.63	069
02.97	0.1967	01.101	0.1807	0.3143	0.3046	0.3407	-0.0082	0.0191	0.0037	0.0361	17.009	300.29	070
03.19	0.2181	01.180	0.2009	0.3150	0.3033	0.3409	-0.0088	0.0105	0.0042	0.0375	16.438	300.63	071
03.43	0.2471	01.254	0.2285	0.3186	0.3043	0.3404	-0.0132	0.0232	0.0041	0.0361	15.414	300.63	072
03.65	0.2649	01.333	0.2449	0.3212	0.3050	0.3411	-0.0104	0.0225	0.0044	0.0361	15.290	300.63	073
03.87	0.2940	01.407	0.2728	0.3238	0.3047	0.3422	-0.0112	0.0213	0.0045	0.0375	14.534	300.63	074
04.11	0.3121	01.478	0.2893	0.3280	0.3064	0.3425	-0.0151	0.0122	0.0048	0.0361	14.387	300.63	075
04.33	0.3408	01.549	0.3169	0.3290	0.3041	0.3416	-0.0090	0.0050	0.0048	0.0375	13.812	300.98	076
04.58	0.3622	01.630	0.3367	0.3340	0.3061	0.3407	-0.0098	0.0110	0.0045	0.0346	13.667	300.98	077
04.81	0.3951	01.704	0.3682	0.3365	0.3045	0.3420	-0.0141	0.0162	0.0057	0.0375	13.103	300.98	078
05.04	0.4247	01.779	0.3965	0.3390	0.3029	0.3419	-0.0184	0.0146	0.0046	0.0390	12.728	300.63	079
05.27	0.4533	01.851	0.4234	0.3455	0.3051	0.3427	-0.0155	0.0138	0.0058	0.0375	12.403	300.98	080
05.50	0.4901	01.909	0.4583	0.3538	0.3082	0.3443	-0.0192	0.0195	0.0061	0.0361	11.836	300.98	081
05.72	0.5199	01.985	0.4868	0.3555	0.3052	0.3442	-0.0159	0.0118	0.0060	0.0390	11.600	300.63	082
05.98	0.5605	02.044	0.5253	0.3649	0.3082	0.3457	-0.0196	0.0103	0.0059	0.0375	11.081	300.63	083
06.24	0.6010	02.104	0.5641	0.3703	0.3068	0.3458	-0.0165	0.0099	0.0062	0.0390	10.633	300.63	084
06.47	0.6341	02.169	0.5954	0.3775	0.3080	0.3470	-0.0170	0.0022	0.0058	0.0390	10.393	300.63	085
06.70	0.6669	02.235	0.6267	0.3819	0.3063	0.3452	-0.0212	0.0155	0.0066	0.0390	10.181	300.63	086
06.95	0.7047	02.287	0.6623	0.3910	0.3080	0.3470	-0.0149	0.0018	0.0071	0.0390	09.861	300.29	087
07.18	0.7520	02.346	0.7074	0.4011	0.3096	0.3471	-0.0191	0.0079	0.0074	0.0375	09.476	300.63	088
07.41	0.7927	02.396	0.7461	0.4095	0.3098	0.3488	-0.0163	0.0008	0.0082	0.0390	09.183	300.63	089
07.64	0.8379	02.459	0.7892	0.4193	0.3106	0.3496	-0.0172	0.0077	0.0078	0.0390	08.915	300.29	090
07.90	0.8700	02.513	0.8194	0.4248	0.3082	0.3472	-0.0109	0.0011	0.0088	0.0390	08.776	300.63	091
08.13	0.9181	02.574	0.8648	0.4384	0.3117	0.3493	-0.0117	0.0007	0.0080	0.0375	08.517	300.63	092
08.38	0.9675	02.621	0.9118	0.4488	0.3110	0.3500	-0.0159	-0.0002	0.0087	0.0390	08.230	300.29	093
08.61	1.0005	02.695	0.9424	0.4586	0.3123	0.3513	-0.0165	-0.0010	0.0097	0.0390	08.184	300.29	094
08.87	1.0601	02.725	0.9991	0.4733	0.3135	0.3525	-0.0141	0.0069	0.0086	0.0390	07.809	300.29	095
09.13	1.0927	02.799	1.0292	0.4824	0.3130	0.3520	-0.0143	-0.0017	0.0091	0.0390	07.782	300.29	096
09.33	1.1406	02.851	1.0747	0.4946	0.3138	0.3528	-0.0182	0.0039	0.0102	0.0390	07.594	300.29	097
09.53	1.1839	02.899	1.1146	0.5090	0.3174	0.3564	-0.0152	0.0037	0.0095	0.0390	07.443	300.63	098
09.73	1.2200	02.957	1.1488	0.5191	0.3174	0.3549	-0.0156	0.0025	0.0103	0.0375	07.365	300.63	099
09.93	1.2567	02.999	1.1827	0.5315	0.3196	0.3571	-0.0126	0.0098	0.0100	0.0375	07.250	300.63	100
10.11	1.2920	03.037	1.2162	0.5399	0.3181	0.3571	-0.0061	0.0029	0.0107	0.0390	07.141	300.98	101
10.28	1.3266	03.089	1.2481	0.5519	0.3203	0.3593	-0.0063	-0.0053	0.0110	0.0390	07.075	300.63	102
10.40	1.3636	03.114	1.2829	0.5638	0.3230	0.3620	-0.0068	0.0017	0.0104	0.0390	06.938	300.63	103
10.46	1.3853	03.161	1.3036	0.5695	0.3233	0.3609	-0.0069	0.0079	0.0108	0.0375	06.932	300.63	104
10.66	1.4224	03.186	1.3377	0.5828	0.3253	0.3629	-0.0108	0.0069	0.0113	0.0375	06.804	300.63	105
10.83	1.4918	03.234	1.3648	0.5923	0.3253	0.3628	-0.0075	-0.0077	0.0105	0.0375	06.767	300.63	106
11.03	1.4887	03.299	1.3985	0.6063	0.3276	0.3651	-0.0013	0.0005	0.0103	0.0375	06.650	300.63	107

CVG HIGH SPEED WIND TUNNEL TEST NUMBER 89 HSWT TEST 89

RUN 024 MACH NO 4.970 RN/L 16399013 Q 1465 PSF TO 596

10/23/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
11.24	1.5327	03.318	1.4388	0.6237	0.3314	0.3689	-0.0016	-0.0008	0.0119	0.0375	06.577	300.63	108
11.44	1.5657	03.359	1.4686	0.6370	0.3331	0.3692	-0.0055	0.0053	0.0111	0.0361	06.517	300.63	109
11.63	1.6320	03.432	1.5311	0.6569	0.3349	0.3710	-0.0027	0.0118	0.0115	0.0361	06.389	300.63	111
11.66	1.6945	03.437	1.5525	0.6634	0.3359	0.3734	-0.0030	0.0117	0.0114	0.0375	06.311	300.63	112
11.72	1.6617	03.463	1.5588	0.6662	0.3356	0.3731	0.0040	-0.0022	0.0118	0.0375	06.332	300.63	113
11.75	1.6729	03.457	1.5691	0.6712	0.3376	0.3737	0.0037	0.0053	0.0113	0.0361	06.279	300.63	114
11.78	1.6805	03.459	1.5762	0.6736	0.3376	0.3737	-0.0031	0.0039	0.0117	0.0361	06.254	300.63	115
11.78	1.6767	03.467	1.5722	0.6741	0.3390	0.3750	0.0039	-0.0094	0.0113	0.0361	06.281	300.63	116
11.78	1.6786	03.471	1.5740	0.6750	0.3394	0.3755	0.0004	-0.0028	0.0115	0.0361	06.281	300.29	117
11.78	1.6729	03.474	1.5691	0.6700	0.3356	0.3731	0.0006	-0.0102	0.0110	0.0375	06.309	300.63	118
11.78	1.6805	03.459	1.5755	0.6768	0.3409	0.3770	0.0037	-0.0019	0.0108	0.0361	06.253	300.63	119
00.23	0.0991	00.097	0.0578	0.3115	0.3112	0.3473	-0.0052	0.0123	0.0016	0.0361	04.974	300.29	020

CVG HIGH SPEED WIND TUNNEL TEST NUMBER 89 HSWT TEST 89

RUN 025 MACH NO 4.970 KN/L 17345449 Q 1463 PSF TO 576

10/23/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
00.32	0.0437	00.109	0.0422	0.2652	0.2649	0.3383	0.0018	0.0245	-0.0009	0.0734	07.570	300.63	006
-10.98	-0.9490	-02.293	-0.8834	0.4291	0.2530	0.3285	0.0429	0.0270	-0.0011	0.0755	07.212	300.29	049
-10.74	-0.9271	-02.222	-0.8637	0.4215	0.2531	0.3286	0.0390	0.0266	-0.0013	0.0755	07.282	300.29	008
-10.92	-0.9017	-02.182	-0.8402	0.4141	0.2537	0.3271	0.0385	0.0175	-0.0009	0.0734	07.353	300.29	009
-10.34	-0.8876	-02.143	-0.8280	0.4073	0.2521	0.3255	0.0380	0.0257	-0.0013	0.0734	07.334	300.29	010
-10.09	-0.8584	-02.112	-0.8008	0.3991	0.2526	0.3260	0.0374	0.0253	-0.0013	0.0734	07.476	300.29	011
-09.88	-0.8357	-02.070	-0.7807	0.3882	0.2485	0.3239	0.0369	0.0162	-0.0009	0.0755	07.526	300.63	012
-09.64	-0.8152	-02.023	-0.7621	0.3818	0.2488	0.3243	0.0295	0.0241	-0.0009	0.0755	07.538	300.29	013
-09.42	-0.7935	-01.993	-0.7420	0.3756	0.2491	0.3246	0.0360	0.0152	-0.0018	0.0755	07.690	300.29	014
-08.75	-0.7326	-01.863	-0.6863	0.3562	0.2476	0.3231	0.0309	0.0222	-0.0016	0.0755	07.728	300.29	017
-08.91	-0.7040	-01.835	-0.6595	0.3498	0.2484	0.3239	0.0269	0.0218	-0.0010	0.0755	07.919	299.94	018
-08.32	-0.6892	-01.784	-0.6463	0.3434	0.2462	0.3217	0.0264	0.0212	-0.0010	0.0755	07.862	300.29	019
-08.08	-0.6638	-01.744	-0.6226	0.3373	0.2464	0.3219	0.0258	0.0207	-0.0001	0.0755	07.980	300.29	020
-07.88	-0.6415	-01.702	-0.6014	0.3339	0.2483	0.3217	0.0253	0.0202	-0.0010	0.0734	08.059	300.63	021
-07.67	-0.6214	-01.666	-0.5829	0.3278	0.2471	0.3226	0.0282	0.0198	-0.0008	0.0755	08.145	299.94	022
-07.44	-0.5989	-01.624	-0.5619	0.3222	0.2468	0.3223	0.0210	0.0192	-0.0013	0.0755	08.237	300.29	023
-07.21	-0.5806	-01.584	-0.5448	0.3200	0.2491	0.3225	0.0242	0.0188	-0.0010	0.0734	08.289	300.29	024
-07.00	-0.5548	-01.544	-0.5200	0.3175	0.2517	0.3230	0.0241	0.0183	-0.0010	0.0713	08.456	300.29	025
-06.77	-0.5399	-01.483	-0.5070	0.3089	0.2470	0.3225	0.0240	0.0176	-0.0010	0.0755	08.347	300.63	026
-06.56	-0.5217	-01.434	-0.4898	0.3072	0.2492	0.3226	0.0238	0.0170	-0.0001	0.0734	08.351	300.63	027
-06.30	-0.4924	-01.415	-0.4619	0.3028	0.2502	0.3236	0.0203	0.0167	-0.0003	0.0734	08.730	300.29	028
-06.12	-0.4704	-01.375	-0.4410	0.2995	0.2508	0.3242	0.0167	0.0248	-0.0009	0.0734	08.879	300.29	029
-05.89	-0.4484	-01.335	-0.4202	0.2959	0.2512	0.3246	0.0199	0.0243	-0.0007	0.0734	09.046	300.29	030
-05.67	-0.4301	-01.286	-0.4030	0.2941	0.2528	0.3262	0.0199	0.0152	-0.0003	0.0734	09.081	300.29	031
-05.44	-0.4119	-01.246	-0.3860	0.2911	0.2531	0.3265	0.0164	0.0232	-0.0009	0.0734	09.189	300.29	032
-05.19	-0.3936	-01.196	-0.3691	0.2877	0.2531	0.3265	0.0197	0.0141	-0.0002	0.0734	09.234	300.29	033
-04.94	-0.3754	-01.157	-0.3522	0.2847	0.2533	0.3267	0.0162	0.0222	-0.0009	0.0734	09.360	300.29	034
-04.72	-0.3568	-01.106	-0.3348	0.2816	0.2531	0.3265	0.0161	0.0216	-0.0008	0.0734	09.415	300.63	035
-04.50	-0.3426	-01.067	-0.3214	0.2832	0.2572	0.3284	0.0126	0.0211	-0.0002	0.0713	09.466	300.29	036
-04.27	-0.3284	-01.008	-0.3085	0.2787	0.2550	0.3284	0.0126	0.0204	-0.0010	0.0734	09.328	300.29	037
-04.02	-0.3062	-00.968	-0.2876	0.2761	0.2553	0.3287	0.0124	0.0199	-0.0001	0.0734	09.607	300.29	038
-03.81	-0.2918	-00.919	-0.2742	0.2739	0.2551	0.3285	0.0125	0.0108	-0.0006	0.0734	09.569	300.29	039
-03.59	-0.2737	-00.870	-0.2569	0.2758	0.2591	0.3304	0.0123	0.0188	-0.0001	0.0713	09.653	300.29	040
-03.34	-0.2554	-00.820	-0.2399	0.2735	0.2591	0.3304	0.0123	0.0096	0.0004	0.0713	09.755	300.29	041
-03.13	-0.2412	-00.761	-0.2267	0.2719	0.2591	0.3304	0.0122	0.0175	-0.0000	0.0713	09.584	300.29	042
-02.88	-0.2229	-00.721	-0.2096	0.2701	0.2592	0.3305	0.0087	0.0170	-0.0002	0.0713	09.830	300.29	043
-02.67	-0.2124	-00.662	-0.2001	0.2686	0.2590	0.3303	0.0121	0.0164	0.0000	0.0713	09.474	300.29	044
-02.24	-0.1836	-00.573	-0.1733	0.2676	0.2606	0.3319	0.0079	0.0153	-0.0003	0.0713	09.486	300.29	046
-02.02	-0.1692	-00.514	-0.1599	0.2676	0.2618	0.3331	0.0075	0.0145	0.0005	0.0713	09.222	300.63	047
-01.80	-0.1513	-00.465	-0.1430	0.2670	0.2623	0.3336	0.0071	0.0140	0.0004	0.0713	09.330	300.29	048
-01.57	-0.1406	-00.415	-0.1334	0.2638	0.2600	0.3313	0.0067	0.0134	0.0003	0.0713	08.969	300.63	049
-01.35	-0.1188	-00.365	-0.1125	0.2648	0.2620	0.3333	0.0063	0.0128	0.0003	0.0713	09.348	300.63	050
-01.11	-0.1083	-00.316	-0.1032	0.2642	0.2621	0.3334	0.0025	0.0123	-0.0000	0.0713	08.880	300.29	051
-00.66	-0.0758	-00.217	-0.0728	0.2610	0.2601	0.3314	0.0017	0.0110	0.0007	0.0713	08.715	300.63	053
-00.45	-0.0619	-00.168	-0.0595	0.2610	0.2605	0.3318	0.0013	0.0104	0.0007	0.0713	08.307	300.29	054
-00.24	-0.0474	-00.109	-0.0463	0.2589	0.2587	0.3300	-0.0024	0.0098	-0.0005	0.0713	06.996	300.29	055
00.19	-0.0188	-00.010	-0.0196	0.2607	0.2608	0.3321	0.0002	0.0087	-0.0004	0.0713	01.697	299.94	057
00.43	-0.0004	00.029	-0.0023	0.2604	0.2604	0.3317	-0.0036	0.0082	-0.0006	0.0713	-44.481	300.29	058
00.64	0.0104	00.088	0.0074	0.2600	0.2599	0.3312	-0.0007	0.0075	0.0006	0.0713	25.867	300.29	059
00.89	0.0249	00.138	0.0209	0.2637	0.2634	0.3325	-0.0012	0.0069	0.0007	0.0692	16.764	300.29	060
01.10	0.0433	00.187	0.0382	0.2640	0.2632	0.3345	0.0016	0.0064	0.0001	0.0713	13.144	299.94	061

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 — MSWT TEST 89

RUN 025 MACH NO 4.970 RN/L 17345449 Q 1463 PSF TO 576 — 10/23/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
01.32	0.0578	00.247	0.0517	0.2658	0.2645	0.3358	-0.0023	0.0057	0.0000	0.0713	12.954	299.94	062
01.56	0.0723	00.296	0.0651	0.2657	0.2639	0.3352	0.0005	0.0051	0.0003	0.0713	12.420	300.29	063
01.78	0.0869	00.345	0.0786	0.2662	0.2636	0.3349	0.0000	0.0046	0.0004	0.0713	12.063	300.29	064
02.02	0.1015	00.404	0.0920	0.2708	0.2674	0.3365	-0.0005	0.0039	0.0005	0.0692	12.111	299.94	065
02.24	0.1199	00.454	0.1095	0.2662	0.2617	0.3330	-0.0045	0.0032	0.0013	0.0713	11.508	299.94	066
02.46	0.1379	00.502	0.1263	0.2721	0.2664	0.3356	-0.0017	0.0027	0.0007	0.0692	11.073	300.63	067
02.69	0.1486	00.561	0.1359	0.2741	0.2674	0.3366	-0.0056	0.0019	0.0015	0.0692	11.475	300.63	068
02.91	0.1671	00.611	0.1531	0.2801	0.2719	0.3369	-0.0062	0.0015	0.0007	0.0650	11.116	300.29	069
03.12	0.1854	00.661	0.1707	0.2752	0.2655	0.3368	-0.0034	0.0007	0.0018	0.0713	10.830	300.29	070
03.36	0.1962	00.720	0.1803	0.2760	0.2649	0.3362	-0.0073	0.0001	0.0017	0.0713	11.149	300.29	071
03.79	0.2328	00.819	0.2148	0.2796	0.2648	0.3361	-0.0050	-0.0010	0.0012	0.0713	10.686	300.29	073
04.51	0.2802	00.977	0.2585	0.2871	0.2659	0.3351	-0.0101	-0.0029	0.0022	0.0692	10.590	300.29	076
04.70	0.3024	01.017	0.2799	0.2867	0.2628	0.3320	-0.0107	-0.0036	0.0031	0.0692	10.213	300.29	077
04.92	0.3211	01.067	0.2969	0.2946	0.2681	0.3372	-0.0183	0.0046	0.0024	0.0692	10.099	299.94	078
05.14	0.3357	01.117	0.3105	0.2947	0.2657	0.3370	-0.0188	0.0040	0.0024	0.0713	10.107	299.94	079
05.37	0.3574	01.169	0.3311	0.2960	0.2638	0.3350	-0.0160	0.0034	0.0027	0.0713	09.905	300.29	080
05.59	0.3795	01.205	0.3518	0.3013	0.2656	0.3369	-0.0098	0.0027	0.0032	0.0713	09.648	300.29	081
05.81	0.3979	01.255	0.3691	0.3028	0.2638	0.3351	-0.0138	0.0022	0.0031	0.0713	09.580	300.29	082
06.08	0.4199	01.304	0.3896	0.3068	0.2638	0.3351	-0.0111	0.0016	0.0034	0.0713	09.436	300.29	083
06.31	0.4422	01.344	0.4105	0.3108	0.2638	0.3351	-0.0185	0.0011	0.0039	0.0713	09.235	300.29	084
06.53	0.4605	01.394	0.4274	0.3160	0.2654	0.3366	-0.0191	0.0005	0.0040	0.0713	09.193	300.29	085
06.79	0.4789	01.433	0.4444	0.3198	0.2654	0.3367	-0.0163	0.0001	0.0034	0.0713	09.093	300.29	086
07.00	0.5053	01.485	0.4693	0.3239	0.2643	0.3356	-0.0136	-0.0006	0.0037	0.0713	08.927	299.94	087
07.22	0.5306	01.523	0.4929	0.3310	0.2664	0.3356	-0.0178	0.0074	0.0040	0.0692	08.721	300.29	088
07.47	0.5567	01.553	0.5176	0.3346	0.2645	0.3358	-0.0150	-0.0016	0.0047	0.0713	08.477	300.29	089
07.69	0.5788	01.603	0.5374	0.3450	0.2700	0.3392	-0.0157	-0.0020	0.0039	0.0692	08.414	300.29	090
07.91	0.6010	01.643	0.5586	0.3465	0.2663	0.3376	-0.0197	-0.0026	0.0046	0.0713	08.304	300.29	091
08.16	0.6230	01.693	0.5790	0.3517	0.2659	0.3393	-0.0200	0.0054	0.0043	0.0734	08.253	300.29	092
08.35	0.6490	01.732	0.6034	0.3582	0.2667	0.3380	-0.0168	-0.0037	0.0051	0.0713	08.110	300.29	093
08.63	0.6710	01.782	0.6234	0.3643	0.2667	0.3379	-0.0205	0.0041	0.0054	0.0713	08.069	300.29	094
08.85	0.6940	01.824	0.6444	0.3724	0.2688	0.3401	-0.0207	0.0037	0.0055	0.0713	07.985	299.94	095
08.99	0.7229	01.862	0.6717	0.3804	0.2707	0.3420	-0.0210	0.0032	0.0056	0.0713	07.826	300.29	096
09.21	0.7412	01.912	0.6887	0.3838	0.2685	0.3419	-0.0212	0.0026	0.0057	0.0734	07.835	300.29	097
09.46	0.7643	01.954	0.7098	0.3909	0.2689	0.3424	-0.0179	-0.0064	0.0056	0.0734	07.765	299.94	098
09.63	0.7895	01.982	0.7334	0.3973	0.2691	0.3425	-0.0182	-0.0068	0.0056	0.0734	07.626	300.29	099
09.82	0.8088	02.024	0.7504	0.4072	0.2733	0.3446	-0.0149	-0.0074	0.0059	0.0713	07.602	299.94	100
09.96	0.8273	02.054	0.7682	0.4088	0.2698	0.3432	-0.0186	0.0008	0.0062	0.0734	07.542	299.94	101
10.04	0.8430	02.086	0.7823	0.4171	0.2742	0.3456	-0.0154	0.0003	0.0065	0.0713	07.518	299.59	102
10.21	0.8579	02.106	0.7958	0.4215	0.2738	0.3473	-0.0189	0.0002	0.0063	0.0734	07.459	299.59	103
10.32	0.8717	02.134	0.8089	0.4238	0.2720	0.3454	-0.0226	0.0083	0.0066	0.0734	07.437	299.94	104
10.48	0.8913	02.166	0.8265	0.4318	0.2742	0.3476	-0.0193	-0.0006	0.0065	0.0734	07.384	299.59	105
10.62	0.9088	02.194	0.8423	0.4390	0.2762	0.3475	-0.0160	-0.0010	0.0067	0.0713	07.334	299.94	106
10.90	0.9235	02.233	0.8551	0.4433	0.2737	0.3471	-0.0196	-0.0014	0.0066	0.0734	07.347	299.94	107
11.07	0.9532	02.274	0.8824	0.4539	0.2760	0.3494	-0.0164	-0.0020	0.0069	0.0734	07.247	299.94	108
11.19	0.9679	02.303	0.8956	0.4607	0.2783	0.3496	-0.0166	-0.0024	0.0070	0.0713	07.230	299.94	109
11.33	0.9866	02.324	0.9131	0.4649	0.2765	0.3499	-0.0168	-0.0026	0.0070	0.0734	07.156	299.94	110
11.33	0.9939	02.344	0.9194	0.4702	0.2804	0.3517	-0.0168	-0.0030	0.0080	0.0713	07.163	299.94	111
11.39	1.0002	02.351	0.9256	0.4700	0.2780	0.3514	-0.0203	-0.0031	0.0078	0.0734	07.140	300.29	112
11.39	1.0077	02.351	0.9329	0.4718	0.2783	0.3517	-0.0204	-0.0031	0.0078	0.0734	07.088	300.29	113
11.42	1.0076	02.361	0.9322	0.4742	0.2803	0.3515	-0.0204	-0.0032	0.0078	0.0713	07.118	300.29	114
11.42	1.0087	02.374	0.9336	0.4727	0.2785	0.3519	-0.0239	0.0052	0.0080	0.0734	07.149	299.94	115

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 HSWT TEST 89

RUN 025 MACH NO 4.970 RN/L 17345449 Q 1463 PSF TO 576

10/23/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
11.42	1.0125	02.374	0.9370	0.4752	0.2802	0.3536	-0.0239	-0.0032	0.0076	0.0734	07.122	299.94	116
07.02	0.6048	01.633	0.5677	0.3388	0.2668	0.3402	-0.0163	-0.0024	0.0038	0.0734	08.204	300.29	108
00.22	0.0448	00.041	0.0437	0.2671	0.2669	0.3361	-0.0045	0.0080	0.0003	0.0692	02.774	299.94	119

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 HSWT TEST 89

RUN 026 MACH NO 3.980 RN/L 21848648 Q 2504 PSF TO 556

10/17/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
00.41	0.0322	00.058	0.0302	0.2742	0.2739	0.3552	0.0032	-0.0057	-0.0005	0.0813	05.459	233.29	006
-11.68	-1.0109	-02.437	-0.9339	0.4759	0.2770	0.3668	0.0800	0.0311	-0.0001	0.0899	07.323	232.94	007
-11.63	-1.0101	-02.434	-0.9333	0.4761	0.2782	0.3681	0.0744	0.0207	-0.0005	0.0899	07.321	232.60	008
-11.52	-1.0022	-02.419	-0.9266	0.4722	0.2777	0.3675	0.0725	0.0200	-0.0006	0.0899	07.332	232.94	009
-11.38	-0.9889	-02.394	-0.9147	0.4673	0.2777	0.3675	0.0807	0.0188	-0.0006	0.0899	07.353	232.60	010
-11.21	-0.9739	-02.364	-0.9015	0.4609	0.2769	0.3668	0.0769	0.0225	-0.0001	0.0899	07.375	232.60	011
-11.01	-0.9518	-02.333	-0.8815	0.4527	0.2761	0.3659	0.0773	0.0208	-0.0000	0.0899	07.446	232.25	012
-10.81	-0.9313	-02.283	-0.8633	0.4446	0.2748	0.3647	0.0736	0.0286	0.0003	0.0899	07.446	232.60	013
-10.56	-0.9057	-02.236	-0.8399	0.4368	0.2755	0.3641	0.0741	0.0214	0.0000	0.0886	07.501	232.60	014
-10.36	-0.8801	-02.195	-0.8167	0.4269	0.2731	0.3630	0.0763	0.0295	-0.0003	0.0899	07.578	232.60	015
-10.13	-0.8544	-02.143	-0.7932	0.4184	0.2724	0.3622	0.0670	0.0219	-0.0001	0.0899	07.619	232.60	016
-09.88	-0.8300	-02.099	-0.7708	0.4119	0.2736	0.3622	0.0696	0.0147	-0.0002	0.0886	07.684	232.25	017
-09.65	-0.7990	-02.050	-0.7423	0.4009	0.2708	0.3607	0.0757	0.0224	0.0002	0.0899	07.794	232.60	018
-09.39	-0.7722	-02.000	-0.7177	0.3930	0.2706	0.3605	0.0645	0.0148	-0.0003	0.0899	07.868	232.25	019
-09.19	-0.7467	-01.942	-0.6942	0.3849	0.2691	0.3589	0.0670	0.0073	0.0001	0.0899	07.901	232.25	020
-08.96	-0.7190	-01.890	-0.6682	0.3786	0.2699	0.3586	0.0655	0.0098	-0.0002	0.0886	07.984	232.25	021
-08.70	-0.6906	-01.846	-0.6416	0.3723	0.2710	0.3596	0.0671	0.0135	-0.0003	0.0886	08.119	231.90	022
-08.47	-0.6644	-01.790	-0.6176	0.3632	0.2682	0.3581	0.0566	0.0122	0.0001	0.0899	08.186	232.25	023
-08.21	-0.6415	-01.738	-0.5966	0.3573	0.2685	0.3572	0.0562	0.0111	-0.0004	0.0886	08.229	232.25	024
-08.01	-0.6167	-01.686	-0.5735	0.3496	0.2663	0.3549	0.0652	0.0156	0.0001	0.0886	08.305	232.25	025
-07.77	-0.5936	-01.639	-0.5521	0.3444	0.2667	0.3541	0.0566	0.0101	-0.0002	0.0874	08.388	232.25	026
-07.55	-0.5683	-01.592	-0.5284	0.3393	0.2669	0.3543	0.0501	0.0044	-0.0004	0.0874	08.510	232.25	027
-07.33	-0.5455	-01.540	-0.5071	0.3338	0.2664	0.3538	0.0513	0.0088	0.0000	0.0874	08.575	232.25	028
-07.08	-0.5197	-01.491	-0.4830	0.3274	0.2653	0.3527	0.0505	0.0083	-0.0005	0.0874	08.716	232.60	029
-06.84	-0.4931	-01.446	-0.4577	0.3249	0.2681	0.3518	0.0458	0.0079	-0.0003	0.0837	08.911	232.25	030
-06.55	-0.4746	-01.394	-0.4411	0.3193	0.2669	0.3518	0.0472	0.0073	-0.0007	0.0849	08.924	232.25	031
-06.38	-0.4495	-01.347	-0.4173	0.3128	0.2645	0.3495	0.0403	0.0120	-0.0003	0.0849	09.107	232.25	032
-06.14	-0.4309	-01.295	-0.3998	0.3126	0.2680	0.3505	0.0378	0.0112	-0.0004	0.0825	09.131	232.25	033
-05.88	-0.4108	-01.245	-0.3813	0.3072	0.2665	0.3502	0.0372	0.0057	-0.0002	0.0837	09.206	231.90	034
-05.65	-0.3915	-01.197	-0.3634	0.3033	0.2661	0.3498	0.0346	0.0051	-0.0003	0.0837	09.284	232.25	035
-05.39	-0.3728	-01.156	-0.3461	0.3000	0.2662	0.3499	0.0342	-0.0004	-0.0006	0.0837	09.419	232.25	036
-05.16	-0.3543	-01.104	-0.3289	0.2971	0.2663	0.3501	0.0295	0.0089	-0.0003	0.0837	09.463	232.25	037
-04.93	-0.3378	-01.057	-0.3136	0.2956	0.2676	0.3501	0.0310	0.0034	-0.0005	0.0825	09.508	232.25	038
-04.69	-0.3230	-01.004	-0.3001	0.2916	0.2661	0.3485	0.0265	0.0028	-0.0002	0.0825	09.441	232.60	039
-04.44	-0.3066	-00.965	-0.2849	0.2911	0.2682	0.3494	0.0264	0.0073	-0.0005	0.0812	09.558	232.25	040
-04.20	-0.2897	-00.912	-0.2694	0.2876	0.2671	0.3496	0.0263	0.0017	-0.0007	0.0825	09.567	232.25	041
-03.98	-0.2772	-00.860	-0.2579	0.2869	0.2683	0.3495	0.0183	0.0010	-0.0007	0.0812	09.428	232.25	042
-03.76	-0.2599	-00.813	-0.2419	0.2832	0.2668	0.3493	0.0200	0.0004	-0.0001	0.0825	09.500	232.60	043
-03.51	-0.2435	-00.768	-0.2267	0.2820	0.2676	0.3501	0.0199	-0.0001	-0.0005	0.0825	09.579	232.25	044
-03.28	-0.2288	-00.721	-0.2131	0.2804	0.2677	0.3502	0.0178	-0.0007	-0.0007	0.0825	09.579	232.25	045
-03.06	-0.2137	-00.674	-0.1992	0.2783	0.2673	0.3498	0.0137	-0.0013	-0.0004	0.0825	09.581	232.60	046
-02.81	-0.1972	-00.629	-0.1837	0.2783	0.2690	0.3515	0.0117	-0.0020	-0.0005	0.0825	09.687	232.25	047
-02.58	-0.1845	-00.576	-0.1722	0.2766	0.2686	0.3511	0.0174	-0.0026	-0.0001	0.0825	09.487	232.60	048
-02.33	-0.1676	-00.530	-0.1565	0.2757	0.2691	0.3503	0.0113	-0.0031	-0.0005	0.0813	09.604	232.60	049
-02.13	-0.1486	-00.484	-0.1385	0.2746	0.2693	0.3518	0.0113	-0.0038	-0.0010	0.0825	09.887	232.60	050
-01.91	-0.1408	-00.433	-0.1317	0.2742	0.2696	0.3521	0.0132	-0.0093	-0.0006	0.0825	09.343	232.25	051
-01.67	-0.1280	-00.386	-0.1201	0.2718	0.2682	0.3507	0.0110	-0.0098	-0.0002	0.0825	09.165	232.60	052
-01.45	-0.1135	-00.341	-0.1066	0.2730	0.2702	0.3514	0.0069	-0.0054	-0.0002	0.0812	09.114	232.25	053
-01.23	-0.0987	-00.294	-0.0928	0.2719	0.2698	0.3511	0.0088	-0.0109	-0.0003	0.0813	09.054	232.60	054
-00.99	-0.0840	-00.254	-0.0794	0.2720	0.2706	0.3518	0.0087	-0.0114	-0.0003	0.0812	09.183	232.25	055
-00.74	-0.0694	-00.202	-0.0659	0.2707	0.2698	0.3510	0.0085	-0.0119	-0.0002	0.0812	08.848	232.25	056

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 — HSWT TEST 8'

RUN 026 MACH NO 3.980 RN/L 21848648 Q 2504 PSF TO 556 — 10/17/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
-00.52	-0.0546	-00.161	-0.0521	0.2734	0.2729	0.3517	0.0064	-0.0076	-0.0001	0.0788	08.986	232.60	057
-00.30	-0.0400	-00.115	-0.0385	0.2709	0.2707	0.3520	0.0063	-0.0081	-0.0006	0.0813	08.773	232.60	058
-00.08	-0.0252	-00.075	-0.0248	0.2715	0.2714	0.3527	0.0042	-0.0087	-0.0002	0.0812	09.052	232.25	059
00.16	-0.0149	-00.029	-0.0157	0.2709	0.2709	0.3522	0.0061	-0.0092	-0.0006	0.0813	05.933	232.60	060
00.35	-0.0023	00.011	-0.0039	0.2725	0.2725	0.3537	0.0060	-0.0148	-0.0003	0.0812	-14.945	232.25	061
00.60	0.0127	00.052	0.0099	0.2714	0.2713	0.3538	0.0036	-0.0152	-0.0004	0.0825	12.301	232.25	062
00.85	0.0232	00.103	0.0191	0.2735	0.2732	0.3532	0.0050	-0.0107	-0.0005	0.0800	13.557	231.90	063
01.05	0.0426	00.144	0.0376	0.2721	0.2714	0.3539	0.0025	-0.0113	-0.0001	0.0825	10.268	232.25	064
01.29	0.0553	00.190	0.0491	0.2737	0.2726	0.3538	0.0020	-0.0118	-0.0000	0.0812	10.433	232.25	065
01.52	0.0703	00.236	0.0630	0.2734	0.2716	0.3528	0.0015	-0.0172	-0.0002	0.0812	10.204	232.25	066
01.77	0.0851	00.288	0.0768	0.2728	0.2703	0.3528	-0.0010	-0.0177	-0.0003	0.0825	10.268	232.25	067
01.99	0.1000	00.334	0.0904	0.2778	0.2745	0.3557	-0.0015	-0.0137	-0.0000	0.0812	10.141	232.25	068
02.21	0.1128	00.380	0.1022	0.2767	0.2725	0.3538	-0.0020	-0.0139	0.0001	0.0812	10.237	232.25	069
02.46	0.1302	00.427	0.1182	0.2812	0.2759	0.3571	-0.0064	-0.0198	0.0001	0.0812	09.959	231.90	070
02.68	0.1404	00.478	0.1274	0.2787	0.2725	0.3537	-0.0010	-0.0151	0.0003	0.0812	10.343	232.25	071
02.90	0.1599	00.525	0.1458	0.2816	0.2739	0.3563	-0.0035	-0.0159	0.0002	0.0825	09.971	231.90	072
03.13	0.1745	00.576	0.1593	0.2837	0.2746	0.3558	-0.0020	-0.0165	0.0004	0.0812	10.025	232.25	073
03.35	0.1895	00.622	0.1732	0.2840	0.2734	0.3559	-0.0025	-0.0170	0.0004	0.0825	09.975	232.25	074
03.57	0.2068	00.675	0.1894	0.2857	0.2734	0.3546	-0.0053	-0.0126	0.0012	0.0812	09.916	231.90	075
03.81	0.2192	00.726	0.2006	0.2866	0.2727	0.3539	-0.0057	-0.0179	0.0005	0.0812	10.057	232.25	076
04.04	0.2410	00.779	0.2211	0.2904	0.2742	0.3566	-0.0083	-0.0139	0.0006	0.0825	09.819	231.90	077
04.28	0.2542	00.826	0.2331	0.2912	0.2730	0.3542	-0.0069	-0.0190	0.0006	0.0812	09.876	231.55	078
04.53	0.2687	00.871	0.2463	0.2938	0.2734	0.3546	-0.0074	-0.0197	0.0006	0.0812	09.849	231.90	079
04.75	0.2858	00.923	0.2622	0.2962	0.2735	0.3547	-0.0079	-0.0203	0.0007	0.0812	09.813	231.90	080
04.98	0.2986	00.975	0.2738	0.2970	0.2721	0.3545	-0.0124	-0.0209	0.0015	0.0825	09.921	231.90	081
05.24	0.3179	01.021	0.2916	0.3014	0.2735	0.3548	-0.0110	-0.0215	0.0017	0.0812	09.761	231.90	082
05.44	0.3372	01.073	0.3095	0.3067	0.2759	0.3559	-0.0112	-0.0223	0.0017	0.0800	09.672	231.90	083
05.70	0.3560	01.118	0.3271	0.3073	0.2733	0.3546	-0.0154	-0.0227	0.0021	0.0812	09.541	232.25	084
05.95	0.3735	01.177	0.3430	0.3122	0.2749	0.3562	-0.0096	-0.0236	0.0020	0.0812	09.577	231.90	085
06.16	0.3950	01.230	0.3632	0.3151	0.2743	0.3556	-0.0078	-0.0242	0.0022	0.0812	09.458	231.90	086
06.45	0.4210	01.276	0.3876	0.3189	0.2734	0.3558	-0.0160	-0.0247	0.0023	0.0825	09.208	231.90	087
06.65	0.4425	01.322	0.4079	0.3223	0.2728	0.3553	-0.0123	-0.0252	0.0022	0.0825	09.078	231.90	088
06.89	0.4639	01.380	0.4276	0.3286	0.2749	0.3574	-0.0104	-0.0263	0.0029	0.0825	09.037	231.90	089
07.12	0.4830	01.437	0.4453	0.3319	0.2742	0.3567	-0.0087	-0.0219	0.0029	0.0825	09.041	231.90	090
07.40	0.5120	01.480	0.4725	0.3376	0.2740	0.3576	-0.0109	-0.0275	0.0031	0.0837	08.782	231.55	091
07.61	0.5335	01.532	0.4920	0.3465	0.2783	0.3608	-0.0089	-0.0285	0.0033	0.0825	08.725	231.55	092
07.87	0.5662	01.567	0.5229	0.3519	0.2770	0.3607	-0.0073	-0.0290	0.0035	0.0837	08.411	231.55	093
08.10	0.5876	01.631	0.5427	0.3569	0.2769	0.3618	-0.0095	-0.0249	0.0037	0.0849	08.433	231.55	094
08.34	0.6126	01.681	0.5660	0.3624	0.2765	0.3626	-0.0096	-0.0258	0.0043	0.0862	08.335	231.90	095
08.60	0.6370	01.741	0.5882	0.3707	0.2786	0.3635	-0.0058	-0.0267	0.0041	0.0849	08.302	231.55	096
08.78	0.6639	01.790	0.6136	0.3765	0.2784	0.3646	-0.0077	-0.0282	0.0045	0.0862	08.193	231.90	097
09.07	0.6917	01.843	0.6392	0.3833	0.2778	0.3652	-0.0057	-0.0295	0.0046	0.0874	08.093	231.90	098
09.30	0.7205	01.897	0.6659	0.3921	0.2793	0.3654	-0.0038	-0.0307	0.0043	0.0862	08.001	231.55	099
09.53	0.7440	01.950	0.6870	0.4009	0.2816	0.3678	-0.0036	-0.0323	0.0046	0.0862	07.961	231.55	100
09.74	0.7675	01.996	0.7089	0.4066	0.2809	0.3683	-0.0036	-0.0335	0.0050	0.0874	07.901	231.55	101
09.92	0.7921	02.051	0.7317	0.4142	0.2820	0.3694	-0.0015	-0.0348	0.0045	0.0874	07.867	231.21	102
10.12	0.8123	02.089	0.7501	0.4202	0.2819	0.3693	-0.0015	-0.0359	0.0050	0.0874	07.811	231.55	103
10.27	0.8372	02.127	0.7735	0.4269	0.2822	0.3696	0.0004	-0.0368	0.0050	0.0874	07.717	231.21	104
10.42	0.8543	02.167	0.7893	0.4311	0.2813	0.3699	0.0004	-0.0377	0.0049	0.0886	07.708	231.21	105
10.56	0.8715	02.196	0.8049	0.4379	0.2829	0.3703	0.0005	-0.0434	0.0046	0.0874	07.656	231.21	106
10.71	0.8843	02.231	0.8163	0.4421	0.2827	0.3714	-0.0014	-0.0443	0.0049	0.0886	07.665	231.21	107

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 HSWT TEST 89

RUN 026 MACH NO 3.980 RN/L 21848648 Q 2504 PSF TO 556

10/17/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
10.88	0.8982	02.269	0.8285	0.4483	0.2839	0.3712	0.0025	-0.0402	0.0048	0.0874	07.675	230.86	108
11.06	0.9242	02.304	0.8525	0.4562	0.2843	0.3729	0.0045	-0.0413	0.0048	0.0886	07.575	230.86	109
11.29	0.9463	02.353	0.8721	0.4651	0.2854	0.3728	0.0026	-0.0424	0.0046	0.0874	07.554	231.21	110
11.47	0.9736	02.392	0.8971	0.4746	0.2867	0.3741	0.0086	-0.0436	0.0049	0.0874	07.463	230.86	111
11.62	0.9928	02.438	0.9146	0.4810	0.2869	0.3755	0.0087	-0.0448	0.0048	0.0886	07.461	230.86	112
11.72	1.0058	02.461	0.9265	0.4854	0.2871	0.3757	0.0046	-0.0454	0.0050	0.0886	07.435	230.86	113
11.78	1.0202	02.483	0.9399	0.4904	0.2882	0.3768	0.0107	-0.0460	0.0048	0.0886	07.393	230.51	114
11.81	1.0272	02.497	0.9466	0.4915	0.2873	0.3746	0.0105	-0.0412	0.0050	0.0874	07.384	230.86	115
11.85	1.0337	02.508	0.9529	0.4923	0.2862	0.3748	0.0126	-0.0465	0.0054	0.0886	07.372	230.86	116
11.87	1.0375	02.506	0.9558	0.4963	0.2890	0.3764	0.0106	-0.0416	0.0055	0.0874	07.339	230.51	117
11.88	1.0373	02.518	0.9556	0.4963	0.2890	0.3764	0.0126	-0.0418	0.0051	0.0874	07.374	230.51	118
11.87	1.0368	02.516	0.9555	0.4944	0.2872	0.3758	0.0106	-0.0466	0.0053	0.0886	07.371	230.17	119
11.90	1.0345	02.521	0.9528	0.4952	0.2881	0.3767	0.0106	-0.0419	0.0055	0.0886	07.405	230.17	120
00.14	0.0275	00.013	0.0268	0.2756	0.2755	0.3577	0.0049	-0.0087	0.0001	0.0822	01.418	221.49	121

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 HSWT TEST 89

RUN 027 MACH NO 2.990 RN/L 14158488 Q 2457 PSF TO 582

10/17/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
00.27	0.0331	00.036	0.0316	0.3184	0.3183	0.4402	0.0034	-0.0204	-0.0012	0.1219	03.285	099.10	006
-11.76	-1.0732	-02.690	-0.9874	0.5225	0.3102	0.4470	0.0840	0.0405	-0.0003	0.1368	07.614	098.40	007
-11.65	-1.0622	-02.666	-0.9777	0.5184	0.3103	0.4471	0.0822	0.0394	-0.0004	0.1368	07.624	098.40	008
-11.48	-1.0402	-02.630	-0.9579	0.5099	0.3091	0.4447	0.0784	0.0378	-0.0001	0.1356	07.681	098.40	009
-11.28	-1.0187	-02.584	-0.9387	0.5017	0.3084	0.4440	0.0769	0.0255	-0.0008	0.1356	07.706	098.58	010
-11.05	-0.9919	-02.541	-0.9145	0.4923	0.3079	0.4435	0.0754	0.0283	-0.0006	0.1356	07.781	098.40	011
-10.84	-0.9596	-02.489	-0.8848	0.4812	0.3061	0.4417	0.0796	0.0362	-0.0003	0.1356	07.879	098.58	012
-10.61	-0.9305	-02.433	-0.8580	0.4735	0.3074	0.4429	0.0725	0.0281	-0.0005	0.1356	07.944	098.40	013
-10.38	-0.8998	-02.380	-0.8299	0.4632	0.3061	0.4416	0.0730	0.0255	-0.0005	0.1356	08.034	098.40	014
-10.15	-0.8714	-02.326	-0.8035	0.4568	0.3081	0.4424	0.0755	0.0331	-0.0003	0.1343	08.110	098.40	015
-09.89	-0.8391	-02.268	-0.7739	0.4463	0.3067	0.4410	0.0699	0.0252	0.0001	0.1343	08.213	098.58	016
-09.66	-0.8070	-02.217	-0.7444	0.4359	0.3047	0.4391	0.0723	0.0228	-0.0003	0.1344	08.346	098.75	017
-09.41	-0.7742	-02.157	-0.7138	0.4280	0.3056	0.4387	0.0710	0.0148	-0.0006	0.1331	08.466	098.75	018
-09.15	-0.7426	-02.102	-0.6845	0.4204	0.3063	0.4381	0.0697	0.0069	0.0000	0.1318	08.599	098.58	019
-08.91	-0.7071	-02.041	-0.6512	0.4115	0.3056	0.4362	0.0640	0.0040	0.0002	0.1307	08.768	098.92	020
-08.69	-0.6791	-01.988	-0.6250	0.4054	0.3063	0.4357	0.0642	0.0020	-0.0003	0.1294	08.892	098.92	021
-08.43	-0.6493	-01.923	-0.5977	0.3964	0.3045	0.4339	0.0596	0.0006	-0.0005	0.1294	08.995	098.92	022
-07.74	-0.5736	-01.772	-0.5274	0.3784	0.3039	0.4295	0.0560	0.0026	0.0003	0.1256	09.384	098.75	025
-07.52	-0.5436	-01.718	-0.4992	0.3724	0.3039	0.4282	0.0531	0.0072	-0.0000	0.1243	09.603	098.75	026
-07.27	-0.5190	-01.662	-0.4762	0.3688	0.3056	0.4273	0.0483	0.0066	0.0002	0.1218	09.728	098.58	027
-07.06	-0.4978	-01.609	-0.4567	0.3627	0.3039	0.4256	0.0456	0.0062	0.0001	0.1218	09.818	098.58	028
-06.81	-0.4736	-01.547	-0.4342	0.3584	0.3044	0.4249	0.0410	-0.0048	-0.0007	0.1206	09.923	098.75	029
-06.54	-0.4531	-01.502	-0.4152	0.3566	0.3069	0.4249	0.0404	-0.0052	-0.0002	0.1180	10.073	098.58	030
-06.38	-0.4320	-01.449	-0.3954	0.3512	0.3052	0.4244	0.0396	0.0044	-0.0002	0.1192	10.190	098.58	031
-06.11	-0.4096	-01.387	-0.3746	0.3484	0.3066	0.4245	0.0389	0.0089	-0.0004	0.1179	10.284	098.40	032
-05.85	-0.3926	-01.333	-0.3593	0.3446	0.3062	0.4241	0.0306	-0.0123	-0.0010	0.1179	10.318	098.40	033
-05.64	-0.3712	-01.286	-0.3393	0.3416	0.3065	0.4244	0.0300	-0.0129	-0.0010	0.1179	10.522	098.40	034
-05.41	-0.3544	-01.238	-0.3238	0.3397	0.3076	0.4256	0.0295	-0.0085	-0.0008	0.1179	10.618	098.40	035
-05.15	-0.3399	-01.180	-0.3109	0.3368	0.3075	0.4254	0.0250	-0.0092	-0.0010	0.1179	10.544	098.40	036
-04.92	-0.3225	-01.130	-0.2948	0.3346	0.3081	0.4248	0.0244	-0.0046	-0.0013	0.1167	10.649	098.58	037
-04.69	-0.3054	-01.083	-0.2792	0.3319	0.3079	0.4259	0.0220	-0.0054	-0.0009	0.1180	10.773	098.58	038
-04.46	-0.2922	-01.022	-0.2673	0.3307	0.3090	0.4270	0.0222	-0.0165	-0.0014	0.1181	10.631	098.75	039
-04.20	-0.2754	-00.977	-0.2519	0.3294	0.3100	0.4280	0.0221	-0.0171	-0.0014	0.1180	10.779	098.58	040
-03.98	-0.2600	-00.922	-0.2378	0.3277	0.3104	0.4284	0.0200	-0.0127	-0.0013	0.1181	10.780	098.75	041
-03.73	-0.2472	-00.864	-0.2266	0.3257	0.3103	0.4284	0.0179	-0.0185	-0.0011	0.1181	10.614	098.75	042
-03.50	-0.2300	-00.823	-0.2104	0.3261	0.3126	0.4307	0.0179	-0.0142	-0.0014	0.1181	10.866	098.75	043
-03.25	-0.2150	-00.775	-0.1969	0.3245	0.3128	0.4309	0.0136	-0.0046	-0.0011	0.1181	10.958	098.75	044
-03.03	-0.2000	-00.723	-0.1832	0.3228	0.3127	0.4320	0.0158	-0.0155	-0.0015	0.1193	10.977	098.75	045
-02.80	-0.1823	-00.680	-0.1668	0.3218	0.3132	0.4326	0.0135	-0.0010	-0.0009	0.1194	11.330	098.92	046
-02.56	-0.1721	-00.623	-0.1579	0.3209	0.3135	0.4341	0.0158	-0.0123	-0.0013	0.1206	11.003	098.75	047
-02.33	-0.1570	-00.571	-0.1441	0.3207	0.3146	0.4352	0.0138	-0.0134	-0.0014	0.1206	11.044	098.75	048
-02.13	-0.1351	-00.530	-0.1233	0.3179	0.3131	0.4337	0.0118	-0.0192	-0.0018	0.1206	11.914	098.75	049
-01.91	-0.1288	-00.483	-0.1183	0.3180	0.3138	0.4344	0.0119	-0.0202	-0.0018	0.1206	11.397	098.75	050
-01.67	-0.1160	-00.425	-0.1068	0.3190	0.3157	0.4363	0.0099	-0.0164	-0.0011	0.1206	11.132	098.75	051
-01.43	-0.1031	-00.385	-0.0952	0.3170	0.3145	0.4364	0.0120	-0.0173	-0.0015	0.1218	11.335	098.75	052
-01.23	-0.0881	-00.338	-0.0812	0.3187	0.3168	0.4373	0.0099	-0.0132	-0.0009	0.1205	11.674	098.58	053
-00.88	-0.0727	-00.286	-0.0678	0.3169	0.3159	0.4364	0.0101	-0.0194	-0.0011	0.1206	11.936	098.75	054
-00.72	-0.0599	-00.239	-0.0560	0.3144	0.3136	0.4354	0.0100	-0.0201	-0.0011	0.1218	12.136	098.58	055
-00.52	-0.0471	-00.193	-0.0442	0.3152	0.3148	0.4365	0.0100	-0.0159	-0.0014	0.1218	12.436	098.58	056
-00.28	-0.0364	-00.140	-0.0349	0.3148	0.3146	0.4364	0.0080	-0.0170	-0.0009	0.1218	11.721	098.58	057
-00.06	-0.0190	-00.094	-0.0186	0.3158	0.3158	0.4376	0.0060	-0.0180	-0.0011	0.1218	14.995	098.58	058

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 HSWT TEST 89

RUN 027 MACH NO 2.990 RN/L 14158488 Q 2457 PSF TO 582

10/17/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
00.16	-0.0063	-00.035	-0.0071	0.3161	0.3161	0.4366	0.0081	-0.0190	-0.0015	0.1205	17.198	098.58	059
00.38	0.0088	00.006	0.0067	0.3139	0.3138	0.4368	0.0058	-0.0144	-0.0013	0.1230	02.145	098.58	060
00.60	0.0217	00.053	0.0184	0.3134	0.3132	0.4350	0.0053	-0.0148	-0.0007	0.1218	07.466	098.75	061
00.85	0.0368	00.101	0.0321	0.3175	0.3170	0.4387	0.0071	-0.0157	-0.0011	0.1218	08.311	098.58	062
01.07	0.0475	00.148	0.0416	0.3148	0.3140	0.4358	0.0067	-0.0210	-0.0007	0.1218	09.440	098.75	063
01.30	0.0606	00.201	0.0534	0.3159	0.3146	0.4364	0.0022	-0.0266	-0.0007	0.1218	10.077	098.58	064
01.55	0.0756	00.248	0.0671	0.3170	0.3151	0.4356	0.0017	-0.0271	-0.0006	0.1206	09.960	098.75	065
01.77	0.0909	00.296	0.0811	0.3196	0.3169	0.4374	0.0034	-0.0278	-0.0004	0.1205	09.882	098.58	066
01.99	0.1036	00.342	0.0926	0.3194	0.3160	0.4366	-0.0011	-0.0232	-0.0004	0.1206	10.036	098.75	067
02.24	0.1167	00.396	0.1043	0.3210	0.3167	0.4372	-0.0015	-0.0289	-0.0000	0.1205	10.304	098.58	068
02.46	0.1294	00.442	0.1158	0.3191	0.3138	0.4344	-0.0040	-0.0341	-0.0008	0.1206	10.383	098.75	069
02.68	0.1402	00.484	0.1253	0.3218	0.3156	0.4362	-0.0042	-0.0348	-0.0003	0.1206	10.480	098.75	070
02.90	0.1506	00.536	0.1344	0.3242	0.3170	0.4352	-0.0046	-0.0403	-0.0005	0.1181	10.805	098.92	071
03.14	0.1701	00.583	0.1525	0.3249	0.3160	0.4354	-0.0031	-0.0360	0.0005	0.1194	10.411	098.92	072
03.36	0.1833	00.637	0.1643	0.3283	0.3180	0.4361	-0.0036	-0.0366	0.0000	0.1181	10.560	098.75	073
03.58	0.1981	00.683	0.1780	0.3271	0.3153	0.4334	-0.0020	-0.0419	0.0005	0.1181	10.476	098.92	074
03.83	0.2085	00.748	0.1870	0.3283	0.3151	0.4332	-0.0045	-0.0324	-0.0001	0.1181	10.894	098.92	075
04.51	0.2538	00.883	0.2283	0.3333	0.3143	0.4324	-0.0080	-0.0289	0.0008	0.1181	10.573	098.92	078
04.71	0.2716	00.944	0.2448	0.3354	0.3142	0.4322	-0.0085	-0.0347	0.0011	0.1181	10.557	098.75	079
04.99	0.2827	00.998	0.2543	0.3371	0.3137	0.4317	-0.0089	-0.0403	0.0015	0.1180	10.728	098.58	080
05.20	0.2995	01.050	0.2699	0.3401	0.3143	0.4311	-0.0094	-0.0407	0.0010	0.1168	10.646	098.75	081
05.43	0.3219	01.111	0.2909	0.3421	0.3130	0.4310	-0.0119	-0.0465	0.0012	0.1180	10.482	098.58	082
05.66	0.3371	01.158	0.3045	0.3451	0.3134	0.4301	-0.0100	-0.0469	0.0015	0.1167	10.438	098.58	083
05.86	0.3520	01.223	0.3181	0.3478	0.3135	0.4302	-0.0102	-0.0376	0.0016	0.1167	10.556	098.58	084
06.18	0.3782	01.277	0.3424	0.3515	0.3126	0.4306	-0.0083	-0.0383	0.0018	0.1180	10.255	098.58	085
06.41	0.4003	01.330	0.3629	0.3555	0.3128	0.4308	-0.0085	-0.0441	0.0021	0.1180	10.091	098.58	086
06.64	0.4222	01.388	0.3833	0.3585	0.3118	0.4310	-0.0109	-0.0396	0.0018	0.1192	09.990	098.58	087
06.90	0.4390	01.433	0.3985	0.3618	0.3113	0.4294	-0.0112	-0.0400	0.0018	0.1181	09.915	098.75	088
07.13	0.4609	01.491	0.4187	0.3661	0.3113	0.4306	-0.0094	-0.0409	0.0020	0.1193	09.831	098.75	089
07.39	0.4882	01.547	0.4442	0.3714	0.3112	0.4317	-0.0118	-0.0417	0.0024	0.1205	09.627	098.58	090
07.59	0.5125	01.594	0.4670	0.3754	0.3104	0.4322	-0.0141	-0.0372	0.0026	0.1218	09.451	098.58	091
07.86	0.5381	01.650	0.4907	0.3805	0.3099	0.4317	-0.0103	-0.0481	0.0029	0.1218	09.318	098.75	092
08.09	0.5668	01.698	0.5177	0.3854	0.3087	0.4343	-0.0106	-0.0440	0.0032	0.1256	09.100	098.75	093
08.35	0.5920	01.765	0.5408	0.3914	0.3087	0.4342	-0.0109	-0.0498	0.0035	0.1255	09.060	098.58	094
08.58	0.6159	01.818	0.5628	0.3983	0.3098	0.4366	-0.0088	-0.0514	0.0036	0.1268	08.969	098.58	095
08.77	0.6477	01.868	0.5928	0.4060	0.3108	0.4377	-0.0088	-0.0578	0.0033	0.1268	08.763	098.75	096
09.06	0.6770	01.942	0.6197	0.4128	0.3101	0.4381	-0.0069	-0.0495	0.0039	0.1280	08.717	098.58	097
09.30	0.7109	01.992	0.6516	0.4195	0.3086	0.4393	-0.0050	-0.0510	0.0039	0.1306	08.514	098.75	098
09.53	0.7347	02.051	0.6734	0.4265	0.3091	0.4397	-0.0070	-0.0473	0.0039	0.1306	08.481	098.75	099
09.74	0.7653	02.104	0.7020	0.4337	0.3087	0.4405	-0.0051	-0.0487	0.0038	0.1319	08.354	098.75	100
09.92	0.7907	02.155	0.7253	0.4426	0.3110	0.4429	-0.0030	-0.0501	0.0038	0.1318	08.281	098.58	101
10.12	0.8134	02.193	0.7461	0.4489	0.3107	0.4426	-0.0031	-0.0512	0.0042	0.1319	08.191	098.75	102
10.27	0.8375	02.229	0.7687	0.4546	0.3102	0.4433	-0.0053	-0.0470	0.0042	0.1331	08.084	098.75	103
10.40	0.8525	02.275	0.7827	0.4580	0.3092	0.4436	0.0009	-0.0532	0.0037	0.1344	08.109	098.75	104
10.55	0.8811	02.317	0.8095	0.4654	0.3093	0.4424	-0.0033	-0.0540	0.0038	0.1331	07.989	098.75	105
10.69	0.8962	02.347	0.8230	0.4717	0.3108	0.4439	0.0007	-0.0449	0.0039	0.1331	07.954	098.75	106
10.87	0.9183	02.382	0.8434	0.4775	0.3099	0.4443	-0.0014	-0.0559	0.0042	0.1344	07.880	098.75	107
11.08	0.9427	02.431	0.8658	0.4841	0.3088	0.4432	0.0026	-0.0570	0.0038	0.1344	07.833	098.92	108
11.29	0.9799	02.496	0.9002	0.4956	0.3097	0.4441	0.0026	-0.0637	0.0038	0.1344	07.737	098.92	109
11.50	1.0039	02.537	0.9218	0.5048	0.3109	0.4466	0.0047	-0.0701	0.0040	0.1357	07.677	098.92	110
11.63	1.0257	02.572	0.9421	0.5110	0.3106	0.4463	0.0065	-0.0659	0.0043	0.1357	07.619	098.92	111

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 HSWT TEST 89

RUN 027 MACH NO 2.990 RN/L 14158488 Q 2457 PSF TO 582

10/17/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
11.70	1.0432	02.608	0.9584	0.5161	0.3111	0.4467	0.0066	-0.0719	0.0045	0.1357	07.594	098.92	112
11.79	1.0536	02.630	0.9675	0.5217	0.3131	0.4488	0.0065	-0.0624	0.0039	0.1356	07.583	098.75	113
11.76	1.0601	02.642	0.9735	0.5251	0.3156	0.4500	0.0066	-0.0629	0.0043	0.1344	07.571	098.75	114
11.85	1.0712	02.648	0.9839	0.5271	0.3138	0.4494	0.0085	-0.0580	0.0042	0.1356	07.510	098.75	115
11.85	1.0752	02.659	0.9878	0.5280	0.3138	0.4494	0.0146	-0.0632	0.0043	0.1356	07.512	098.58	116
11.86	1.0774	02.665	0.9898	0.5294	0.3147	0.4503	0.0085	-0.0633	0.0039	0.1356	07.513	098.58	117
11.85	1.0693	02.649	0.9823	0.5258	0.3128	0.4485	0.0065	-0.0631	0.0048	0.1357	07.527	098.92	118
11.85	1.0711	02.660	0.9839	0.5270	0.3136	0.4492	0.0086	-0.0684	0.0047	0.1356	07.543	098.75	119
00.14	0.0315	00.001	0.0307	0.3183	0.3182	0.4400	0.0015	-0.0298	-0.0009	0.1218	00.089	098.75	120

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 HSWT TEST 89

RUN 028 MACH NO 2.010 RN/L 11010401 Q 2436 PSF TO 586

10/17/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
00.16	0.0227	00.006	0.0216	0.3942	0.3941	0.5605	-0.0043	-0.0204	-0.0029	0.1663	00.868	047.35	006
-11.66	-0.8847	-02.758	-0.7919	0.5400	0.3689	0.5787	0.0683	0.0363	-0.0027	0.2098	09.469	047.42	007
-11.45	-0.8629	-02.698	-0.7724	0.5335	0.3695	0.5780	0.0708	0.0389	-0.0022	0.2085	09.498	047.42	008
-11.22	-0.8355	-02.623	-0.7476	0.5248	0.3692	0.5754	0.0653	0.0356	-0.0015	0.2062	09.537	047.48	009
-10.99	-0.8049	-02.557	-0.7191	0.5191	0.3725	0.5761	0.0720	0.0377	-0.0024	0.2036	09.652	047.48	010
-10.76	-0.7808	-02.497	-0.6978	0.5103	0.3711	0.5735	0.0685	0.0401	-0.0023	0.2024	09.717	047.48	011
-10.52	-0.7489	-02.428	-0.6686	0.5014	0.3708	0.5721	0.0671	0.0266	-0.0024	0.2013	09.851	047.55	012
-10.30	-0.7316	-02.369	-0.6540	0.4926	0.3677	0.5690	0.0657	0.0190	-0.0022	0.2013	09.838	047.55	013
-10.04	-0.7008	-02.303	-0.6256	0.4864	0.3698	0.5686	0.0643	0.0210	-0.0021	0.1987	09.984	047.55	014
-09.79	-0.6825	-02.247	-0.6095	0.4817	0.3710	0.5687	0.0627	0.0187	-0.0021	0.1977	10.000	047.61	015
-09.58	-0.6514	-02.181	-0.5806	0.4742	0.3709	0.5669	0.0636	0.0102	-0.0018	0.1960	10.173	047.48	016
-09.33	-0.6302	-02.116	-0.5617	0.4685	0.3712	0.5659	0.0655	0.0135	-0.0024	0.1947	10.200	047.48	017
-09.08	-0.6037	-02.047	-0.5378	0.4600	0.3694	0.5631	0.0608	0.0119	-0.0021	0.1937	10.304	047.55	018
-08.85	-0.5825	-01.988	-0.5185	0.4561	0.3709	0.5621	0.0604	0.0105	-0.0026	0.1911	10.369	047.55	019
-08.62	-0.5613	-01.929	-0.4989	0.4534	0.3735	0.5621	0.0620	0.0143	-0.0021	0.1886	10.439	047.55	020
-08.40	-0.5445	-01.863	-0.4840	0.4498	0.3743	0.5616	0.0555	0.0127	-0.0019	0.1873	10.396	047.55	021
-08.16	-0.5260	-01.818	-0.4676	0.4451	0.3742	0.5613	0.0574	0.0065	-0.0026	0.1871	10.501	047.48	022
-07.94	-0.5023	-01.758	-0.4456	0.4418	0.3760	0.5593	0.0487	0.0002	-0.0023	0.1833	10.634	047.48	023
-07.70	-0.4882	-01.707	-0.4336	0.4369	0.3749	0.5580	0.0462	-0.0004	-0.0019	0.1831	10.622	047.42	024
-07.48	-0.4620	-01.645	-0.4093	0.4319	0.3750	0.5558	0.0473	0.0041	-0.0026	0.1808	10.819	047.48	025
-07.24	-0.4465	-01.595	-0.3956	0.4294	0.3762	0.5559	0.0447	0.0035	-0.0022	0.1797	10.855	047.55	026
-07.02	-0.4277	-01.524	-0.3785	0.4258	0.3764	0.5549	0.0400	0.0026	-0.0024	0.1785	10.827	047.55	027
-06.80	-0.4107	-01.483	-0.3633	0.4217	0.3757	0.5542	0.0455	0.0073	-0.0023	0.1785	10.968	047.55	028
-06.49	-0.3954	-01.433	-0.3504	0.4182	0.3759	0.5533	0.0449	0.0068	-0.0028	0.1774	11.012	047.61	029
-06.35	-0.3784	-01.380	-0.3342	0.4175	0.3780	0.5541	0.0323	0.0008	-0.0028	0.1762	11.077	047.61	030
-06.10	-0.3614	-01.332	-0.3190	0.4159	0.3796	0.5533	0.0357	0.0003	-0.0025	0.1736	11.198	047.61	031
-05.86	-0.3402	-01.273	-0.2997	0.4119	0.3792	0.5516	0.0349	0.0048	-0.0017	0.1724	11.367	047.61	032
-05.63	-0.3322	-01.220	-0.2935	0.4089	0.3781	0.5492	0.0347	-0.0010	-0.0025	0.1711	11.154	047.61	033
-05.40	-0.3142	-01.183	-0.2770	0.4082	0.3804	0.5508	0.0321	0.0037	-0.0024	0.1704	11.436	047.42	034
-05.15	-0.3021	-01.131	-0.2666	0.4080	0.3824	0.5513	0.0297	0.0030	-0.0025	0.1689	11.373	047.35	035
-04.89	-0.2917	-01.085	-0.2581	0.4058	0.3823	0.5509	0.0277	-0.0027	-0.0029	0.1686	11.297	047.29	036
-04.68	-0.2718	-01.030	-0.2396	0.4037	0.3828	0.5517	0.0315	0.0019	-0.0034	0.1689	11.509	047.35	037
-04.43	-0.2607	-00.975	-0.2304	0.4008	0.3818	0.5497	0.0253	-0.0040	-0.0029	0.1679	11.361	047.42	038
-04.20	-0.2470	-00.937	-0.2183	0.3992	0.3821	0.5505	0.0270	0.0059	-0.0028	0.1683	11.520	047.55	039
-03.97	-0.2231	-00.878	-0.1960	0.3983	0.3838	0.5506	0.0249	-0.0051	-0.0029	0.1668	11.955	047.48	040
-03.75	-0.2191	-00.831	-0.1935	0.3978	0.3843	0.5511	0.0187	-0.0057	-0.0027	0.1668	11.517	047.48	041
-03.50	-0.1968	-00.794	-0.1730	0.3952	0.3839	0.5510	0.0206	-0.0061	-0.0031	0.1671	12.253	047.55	042
-03.28	-0.1906	-00.728	-0.1684	0.3928	0.3826	0.5499	0.0205	-0.0068	-0.0030	0.1673	11.602	047.61	043
-03.03	-0.1753	-00.692	-0.1548	0.3928	0.3841	0.5501	0.0202	-0.0021	-0.0028	0.1661	11.995	047.61	044
-02.81	-0.1604	-00.646	-0.1413	0.3933	0.3859	0.5530	0.0181	-0.0027	-0.0029	0.1671	12.231	047.55	045
-02.59	-0.1496	-00.610	-0.1321	0.3922	0.3858	0.5529	0.0141	-0.0086	-0.0029	0.1671	12.384	047.55	046
-02.34	-0.1396	-00.558	-0.1237	0.3912	0.3858	0.5527	0.0163	-0.0096	-0.0032	0.1668	12.140	047.48	047
-02.11	-0.1225	-00.492	-0.1082	0.3906	0.3864	0.5519	0.0183	-0.0107	-0.0026	0.1656	12.210	047.48	048
-01.92	-0.1144	-00.451	-0.1014	0.3887	0.3851	0.5517	0.0101	-0.0013	-0.0026	0.1666	11.990	047.42	049
-01.68	-0.1014	-00.422	-0.0900	0.3900	0.3871	0.5537	0.0122	-0.0073	-0.0027	0.1666	12.631	047.42	050
-01.47	-0.0931	-00.368	-0.0832	0.3863	0.3840	0.5508	0.0124	-0.0134	-0.0024	0.1668	12.007	047.48	051
-01.22	-0.0803	-00.314	-0.0720	0.3876	0.3859	0.5533	0.0124	-0.0144	-0.0024	0.1673	11.876	047.61	052
-00.98	-0.0676	-00.266	-0.0609	0.3912	0.3901	0.5561	0.0105	-0.0205	-0.0028	0.1661	11.978	047.61	053
-00.76	-0.0525	-00.231	-0.0473	0.3920	0.3913	0.5571	0.0043	-0.0162	-0.0024	0.1658	13.368	047.55	054
-00.54	-0.0377	-00.178	-0.0340	0.3919	0.3916	0.5574	0.0084	-0.0172	-0.0027	0.1658	14.323	047.55	055
-00.32	-0.0317	-00.130	-0.0295	0.3903	0.3901	0.5572	0.0105	-0.0181	-0.0025	0.1671	12.489	047.55	056

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 HSWT TEST 89

RUN 028 MACH NO 2.010 RN/L 11010401 Q 2436 PSF TO 586

10/17/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
-00.08	-0.0191	-00.077	-0.0186	0.3879	0.3879	0.5563	0.0106	-0.0191	-0.0025	0.1683	12.256	047.55	057
00.16	-0.0065	-00.030	-0.0076	0.3903	0.3903	0.5571	0.0106	-0.0150	-0.0022	0.1668	13.967	047.48	058
00.35	0.0043	00.006	0.0019	0.3894	0.3893	0.5562	0.0106	-0.0206	-0.0025	0.1668	04.027	047.48	059
00.58	0.0196	00.053	0.0157	0.3895	0.3893	0.5567	0.0101	-0.0211	-0.0029	0.1673	08.232	047.61	060
00.80	0.0306	00.095	0.0252	0.3896	0.3892	0.5565	0.0097	-0.0216	-0.0018	0.1673	09.390	047.61	061
01.05	0.0435	00.148	0.0364	0.3898	0.3891	0.5567	0.0072	-0.0170	-0.0022	0.1676	10.306	047.68	062
01.24	0.0522	00.195	0.0438	0.3902	0.3891	0.5552	0.0091	-0.0278	-0.0020	0.1661	11.333	047.61	063
01.49	0.0655	00.231	0.0554	0.3904	0.3889	0.5560	0.0066	-0.0231	-0.0018	0.1671	10.706	047.55	064
01.73	0.0719	00.284	0.0601	0.3923	0.3904	0.5572	0.0002	-0.0236	-0.0021	0.1668	12.004	047.48	065
01.95	0.0850	00.338	0.0716	0.3941	0.3915	0.5570	-0.0001	-0.0293	-0.0023	0.1656	12.058	047.48	066
02.18	0.0959	00.385	0.0810	0.3925	0.3891	0.5560	0.0036	-0.0299	-0.0020	0.1668	12.196	047.48	067
02.42	0.1066	00.432	0.0900	0.3934	0.3893	0.5551	0.0032	-0.0253	-0.0017	0.1658	12.308	047.55	068
02.64	0.1195	00.484	0.1015	0.3920	0.3869	0.5542	0.0007	-0.0259	-0.0017	0.1673	12.316	047.61	069
02.89	0.1350	00.532	0.1151	0.3974	0.3911	0.5569	0.0003	-0.0264	-0.0017	0.1658	11.982	047.55	070
03.10	0.1436	00.580	0.1223	0.3961	0.3889	0.5548	-0.0001	-0.0270	-0.0016	0.1658	12.264	047.55	071
03.34	0.1542	00.626	0.1313	0.3961	0.3878	0.5539	0.0016	-0.0275	-0.0014	0.1661	12.334	047.61	072
03.54	0.1676	00.669	0.1434	0.3974	0.3878	0.5537	0.0013	-0.0280	-0.0014	0.1658	12.118	047.55	073
03.78	0.1807	00.722	0.1548	0.3984	0.3873	0.5544	-0.0011	-0.0336	-0.0017	0.1671	12.134	047.55	074
04.03	0.1937	00.775	0.1660	0.4000	0.3874	0.5545	0.0024	-0.0241	-0.0009	0.1671	12.159	047.55	075
04.24	0.2048	00.823	0.1756	0.4013	0.3872	0.5541	0.0042	-0.0298	-0.0009	0.1668	12.215	047.48	076
04.49	0.2180	00.871	0.1871	0.4020	0.3861	0.5529	-0.0024	-0.0302	-0.0013	0.1668	12.138	047.48	077
04.71	0.2264	00.917	0.1941	0.4008	0.3835	0.5518	-0.0047	-0.0358	-0.0011	0.1683	12.306	047.55	078
04.94	0.2462	00.959	0.2123	0.4036	0.3839	0.5522	-0.0012	-0.0312	-0.0005	0.1683	11.829	047.55	079
05.14	0.2544	01.016	0.2192	0.4038	0.3825	0.5511	-0.0036	-0.0369	-0.0008	0.1686	12.135	047.61	080
05.39	0.2697	01.070	0.2326	0.4056	0.3820	0.5531	-0.0020	-0.0324	-0.0004	0.1711	12.050	047.61	081
05.64	0.2832	01.118	0.2442	0.4085	0.3826	0.5547	-0.0045	-0.0330	-0.0004	0.1721	12.000	047.55	082
05.87	0.2981	01.164	0.2574	0.4114	0.3829	0.5540	-0.0007	-0.0335	-0.0001	0.1711	11.866	047.61	083
06.10	0.3116	01.225	0.2694	0.4114	0.3805	0.5526	-0.0070	-0.0342	0.0001	0.1721	11.945	047.55	084
06.38	0.3296	01.268	0.2856	0.4139	0.3797	0.5554	-0.0031	-0.0348	0.0005	0.1757	11.690	047.48	085
06.58	0.3495	01.322	0.3037	0.4171	0.3795	0.5565	-0.0013	-0.0406	0.0004	0.1770	11.491	047.48	086
06.81	0.3654	01.383	0.3178	0.4206	0.3800	0.5580	-0.0035	-0.0515	0.0004	0.1780	11.499	047.42	087
07.07	0.3841	01.427	0.3342	0.4262	0.3818	0.5616	0.0002	-0.0420	0.0017	0.1797	11.286	047.55	088
07.30	0.3976	01.498	0.3468	0.4220	0.3746	0.5562	-0.0021	-0.0375	0.0009	0.1817	11.445	047.74	089
07.53	0.4203	01.542	0.3672	0.4289	0.3771	0.5573	-0.0024	-0.0380	0.0010	0.1802	11.144	047.68	090
07.79	0.4394	01.599	0.3846	0.4307	0.3746	0.5575	0.0015	-0.0438	0.0011	0.1829	11.053	047.74	091
08.04	0.4642	01.649	0.4069	0.4379	0.3766	0.5606	-0.0010	-0.0342	0.0010	0.1840	10.789	047.68	092
08.28	0.4840	01.708	0.4248	0.4421	0.3764	0.5616	-0.0012	-0.0400	0.0014	0.1853	10.720	047.68	093
08.51	0.5044	01.763	0.4434	0.4454	0.3749	0.5625	0.0026	-0.0459	0.0020	0.1876	10.620	047.61	094
08.71	0.5171	01.828	0.4546	0.4475	0.3735	0.5624	0.0005	-0.0420	0.0022	0.1888	10.741	047.61	095
08.97	0.5396	01.884	0.4745	0.4553	0.3758	0.5644	0.0005	-0.0432	0.0016	0.1886	10.609	047.55	096
09.19	0.5570	01.932	0.4900	0.4589	0.3747	0.5646	-0.0017	-0.0392	0.0018	0.1899	10.538	047.55	097
09.43	0.5833	01.992	0.5142	0.4640	0.3736	0.5660	-0.0037	-0.0456	0.0014	0.1924	10.373	047.55	098
09.63	0.5951	02.048	0.5246	0.4663	0.3720	0.5672	0.0004	-0.0470	0.0016	0.1952	10.454	047.61	099
09.83	0.6205	02.099	0.5483	0.4700	0.3694	0.5660	0.0045	-0.0483	0.0019	0.1966	10.275	047.68	100
09.98	0.6400	02.152	0.5665	0.4733	0.3679	0.5645	0.0044	-0.0443	0.0016	0.1966	10.216	047.68	101
10.16	0.6550	02.199	0.5796	0.4794	0.3697	0.5676	0.0065	-0.0456	0.0022	0.1979	10.201	047.68	102
10.27	0.6699	02.235	0.5930	0.4845	0.3710	0.5684	0.0044	-0.0413	0.0022	0.1975	10.137	047.55	103
10.38	0.6986	02.289	0.6203	0.4911	0.3713	0.5701	0.0024	-0.0528	0.0025	0.1987	09.954	047.55	104
10.57	0.7105	02.310	0.6306	0.4943	0.3702	0.5700	0.0043	-0.0481	0.0023	0.1998	09.878	047.48	105
10.78	0.7310	02.378	0.6491	0.5002	0.3703	0.5716	0.0084	-0.0448	0.0032	0.2013	09.884	047.55	106
10.92	0.7406	02.417	0.6568	0.5054	0.3718	0.5742	0.0044	-0.0507	0.0032	0.2024	09.914	047.48	107

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 — MSHT TEST 89

RUN 028 MACH NO 2.010 RN/L 11010401 Q 2436 PSF TO 586 — 10/17/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
11.13	0.7747	02.480	0.6877	0.5173	0.3748	0.5773	0.0145	-0.0524	0.0031	0.2025	09.724	047.55	108
11.37	0.7885	02.535	0.7001	0.5179	0.3698	0.5738	0.0186	-0.0486	0.0030	0.2040	09.769	047.61	109
11.47	0.8159	02.586	0.7261	0.5242	0.3693	0.5748	0.0185	-0.0497	0.0028	0.2055	09.628	047.68	110
11.57	0.8276	02.631	0.7362	0.5308	0.3724	0.5777	0.0186	-0.0457	0.0030	0.2053	09.656	047.61	111
11.63	0.8429	02.666	0.7514	0.5301	0.3676	0.5742	0.0186	-0.0467	0.0040	0.2065	09.610	047.61	112
11.64	0.8474	02.674	0.7549	0.5353	0.3720	0.5769	0.0185	-0.0415	0.0032	0.2049	09.585	047.48	113
11.69	0.8495	02.691	0.7572	0.5331	0.3686	0.5748	0.0187	-0.0522	0.0032	0.2062	09.624	047.48	114
11.72	0.8516	02.703	0.7591	0.5330	0.3676	0.5738	0.0208	-0.0525	0.0033	0.2062	09.643	047.48	115
11.73	0.8549	02.705	0.7621	0.5348	0.3687	0.5751	0.0208	-0.0576	0.0030	0.2063	09.614	047.55	116
11.76	0.8589	02.716	0.7649	0.5402	0.3729	0.5797	0.0226	-0.0426	0.0034	0.2067	09.606	047.68	118
00.11	0.0271	00.607	0.0263	0.3916	0.3916	0.5584	0.0099	-0.0204	-0.0020	0.1668	00.742	047.48	119

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 — HSWT TEST 89

RUN 029 MACH NO 0.605 RN/L 08528337 Q 1131 PSF TO 582 — 10/17/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
00.28	0.0106	-00.020	0.0088	0.3830	0.3829	0.3778	0.0406	-0.0869	0.0014	-0.0051	-05.831	039.30	006
-10.37	-1.9808	05.910	-1.8868	0.6933	0.3423	0.3566	0.0370	-0.1344	0.0063	0.0143	-09.065	039.27	007
-09.97	-1.7826	05.384	-1.6949	0.6548	0.3516	0.3656	0.0463	-0.1309	0.0075	0.0140	-09.176	039.27	008
-09.56	-1.6997	05.161	-1.6169	0.6335	0.3561	0.3690	0.0356	-0.1182	0.0063	0.0128	-09.225	039.30	009
-09.11	-1.5651	04.764	-1.4887	0.6010	0.3577	0.3679	0.0417	-0.1177	0.0060	0.0101	-09.248	039.34	010
-08.71	-1.4894	04.481	-1.4174	0.5837	0.3622	0.3719	0.0355	-0.0934	0.0045	0.0096	-09.139	039.30	011
-08.29	-1.3953	04.174	-1.3280	0.5631	0.3657	0.3753	0.0296	-0.1350	0.0047	0.0096	-09.089	039.30	012
-07.89	-1.3105	03.882	-1.2475	0.5452	0.3687	0.3751	0.0406	-0.0796	0.0060	0.0064	-09.000	039.30	013
-07.47	-1.2774	03.853	-1.2190	0.5289	0.3660	0.3737	0.0176	-0.0640	0.0057	0.0077	-09.164	039.30	014
-07.06	-1.1582	03.509	-1.1038	0.5107	0.3713	0.3783	0.0159	-0.1324	0.0056	0.0070	-09.206	039.27	015
-06.67	-1.0992	03.291	-1.0483	0.4988	0.3736	0.3786	0.0238	-0.0804	0.0052	0.0049	-09.096	039.21	016
-06.29	-0.9809	02.937	-0.9340	0.4797	0.3745	0.3806	0.0276	-0.0663	0.0042	0.0061	-09.095	039.14	017
-05.86	-0.8817	02.567	-0.8387	0.4645	0.3765	0.3807	0.0230	-0.0722	0.0037	0.0042	-08.844	039.21	018
-05.44	-0.8418	02.470	-0.8025	0.4535	0.3753	0.3797	0.0277	-0.1176	0.0032	0.0044	-08.913	039.24	019
-05.02	-0.7810	02.280	-0.7452	0.4421	0.3753	0.3821	0.0173	-0.0032	0.0023	0.0069	-08.868	039.18	020
-04.59	-0.6804	02.010	-0.6482	0.4274	0.3741	0.3775	0.0074	0.0168	0.0012	0.0034	-08.977	039.24	021
-04.15	-0.6016	01.712	-0.5727	0.4202	0.3776	0.3793	0.0209	-0.0054	-0.0003	0.0017	-08.645	039.24	022
-03.71	-0.5600	01.526	-0.5344	0.4130	0.3775	0.3785	0.0260	-0.0408	0.0019	0.0010	-08.280	039.21	023
-03.30	-0.4619	01.261	-0.4393	0.4042	0.3783	0.3792	0.0168	-0.0773	0.0030	0.0010	-08.291	039.24	024
-02.87	-0.3918	01.082	-0.3724	0.3972	0.3781	0.3783	0.0296	-0.0728	0.0012	0.0002	-08.388	039.21	025
-02.43	-0.3558	00.958	-0.3394	0.3933	0.3785	0.3789	0.0291	-0.0337	0.0020	0.0004	-08.177	039.27	026
-02.02	-0.2809	00.739	-0.2673	0.3900	0.3803	0.3789	0.0345	-0.0779	0.0023	-0.0015	-07.992	039.24	027
-01.64	-0.2293	00.575	-0.2182	0.3880	0.3816	0.3794	0.0396	-0.1125	0.0021	-0.0022	-07.615	039.24	028
-01.22	-0.1491	00.355	-0.1410	0.3851	0.3820	0.3811	0.0355	-0.1203	0.0018	-0.0009	-07.237	039.24	029
-00.76	-0.0896	00.218	-0.0845	0.3832	0.3820	0.3822	0.0357	-0.1098	0.0019	0.0002	-07.388	039.18	030
-00.36	-0.0389	00.077	-0.0365	0.3811	0.3809	0.3791	0.0317	-0.1180	0.0007	-0.0018	-05.988	039.14	031
00.05	0.0007	-00.001	0.0004	0.3803	0.3803	0.3785	0.0358	-0.0965	0.0006	-0.0018	-04.474	039.24	032
00.46	0.0759	-00.179	0.0729	0.3792	0.3786	0.3782	0.0616	-0.0808	0.0004	-0.0003	-07.175	039.24	033
00.89	0.1166	-00.280	0.1106	0.3833	0.3815	0.3806	0.0437	-0.0934	0.0021	-0.0009	-07.283	039.21	034
01.33	0.1871	-00.459	0.1782	0.3852	0.3810	0.3807	0.0247	-0.0849	0.0003	-0.0003	-07.446	039.21	035
01.74	0.2261	-00.535	0.2144	0.3870	0.3803	0.3780	0.0374	-0.1099	0.0017	-0.0022	-07.189	039.24	036
02.18	0.2832	-00.678	0.2686	0.3902	0.3797	0.3788	0.0328	-0.1665	0.0026	-0.0009	-07.272	039.21	037
02.59	0.3840	-00.936	0.3665	0.3963	0.3794	0.3790	0.0269	-0.1548	0.0015	-0.0003	-07.409	039.21	038
03.04	0.4235	-01.056	0.4027	0.4031	0.3812	0.3810	0.0485	-0.1873	0.0040	-0.0002	-07.574	039.27	039
03.41	0.5270	-01.369	0.5031	0.4163	0.3857	0.3803	0.0467	-0.1734	0.0032	-0.0054	-07.895	039.27	040
03.84	0.5627	-01.493	0.5361	0.4155	0.3787	0.3739	0.0411	-0.1246	0.0035	-0.0048	-08.060	039.24	041
04.29	0.6536	-01.753	0.6234	0.4265	0.3787	0.3758	0.0443	-0.1327	0.0042	-0.0029	-08.149	039.24	042
04.68	0.7441	-02.013	0.7106	0.4401	0.3807	0.3770	0.0292	-0.0670	0.0048	-0.0037	-08.217	039.21	043
05.09	0.8082	-02.222	0.7713	0.4493	0.3791	0.3780	0.0378	-0.1294	0.0059	-0.0011	-08.355	039.21	044
05.54	0.8760	-02.415	0.8357	0.4581	0.3753	0.3735	0.0499	-0.1341	0.0060	-0.0018	-08.377	039.21	045
05.95	0.9697	-02.701	0.9254	0.4751	0.3766	0.3761	0.0403	-0.1517	0.0064	-0.0005	-08.463	039.21	046
06.39	1.0518	-02.985	1.0034	0.4909	0.3762	0.3787	0.0345	-0.0933	0.0059	0.0025	-08.622	039.18	047
06.83	1.1189	-03.178	1.0665	0.5042	0.3738	0.3720	0.0336	-0.1089	0.0067	-0.0018	-08.630	039.27	048
07.24	1.2510	-03.576	1.1942	0.5267	0.3720	0.3781	0.0458	-0.1408	0.0061	0.0061	-08.683	039.21	049
07.68	1.3282	-03.843	1.2662	0.5488	0.3747	0.3768	0.0212	-0.1477	0.0070	0.0021	-08.791	039.21	050
08.12	1.3991	-04.059	1.3328	0.5643	0.3705	0.3783	0.0145	-0.0884	0.0075	0.0078	-08.812	039.18	.051
08.50	1.4912	-04.299	1.4210	0.5801	0.3636	0.3732	0.0213	-0.0916	0.0093	0.0097	-08.758	039.18	052
08.86	1.6198	-04.689	1.5437	0.6134	0.3683	0.3753	0.0176	-0.0742	0.0125	0.0070	-08.794	039.18	053
09.17	1.6688	-04.833	1.5884	0.6316	0.3704	0.3776	0.0122	-0.0729	0.0132	0.0072	-08.797	039.18	054
09.40	1.7237	-05.003	1.6412	0.6399	0.3633	0.3756	0.0067	-0.1078	0.0104	0.0123	-08.818	039.18	055
09.65	1.7977	-05.239	1.7118	0.6565	0.3602	0.3693	0.0084	-0.0360	0.0119	0.0091	-08.853	039.18	056

CVC HIGH SPEED WIND TUNNEL TEST NUMBER 89 HSWT TEST 89

RUN 029 MACH NO 0.605 RN/L 08528337 Q 1131 PSF TO 582 10/17/62

COEFFICIENTS

ALPHA	N	PM	L	D	A	AU	Y	YM	RM	AB	CP	PO	PNT
09.99	1.8840	-05.483	1.7927	0.6833	0.3621	0.3704	0.0058	-0.0122	0.0148	0.0083	-08.842	039.18	057
10.32	1.9816	-05.765	1.8846	0.7115	0.3622	0.3687	-0.0145	0.0000	0.0137	0.0065	-08.839	039.18	058
10.48	2.0116	-05.911	1.9124	0.7207	0.3610	0.3674	0.0021	-0.0124	0.0144	0.0064	-08.926	039.21	059
10.53	1.9906	-05.809	1.8921	0.7133	0.3554	0.3611	0.0025	0.0135	0.0164	0.0057	-08.865	039.18	060
10.55	2.0740	-06.090	1.9739	0.7292	0.3554	0.3663	-0.0175	0.0348	0.0148	0.0110	-08.920	039.21	061
10.58	1.9573	-05.761	1.8591	0.7070	0.3535	0.3556	-0.0148	0.0014	0.0156	0.0021	-08.941	039.34	062
10.32	1.9106	-05.574	1.8156	0.6945	0.3579	0.3555	-0.0097	-0.0342	0.0144	-0.0024	-08.862	039.88	063
00.05	0.0057	-00.021	0.0054	0.3797	0.3796	0.3758	0.0090	-0.0457	0.0012	-0.0038	-11.290	038.92	064
00.07	-0.0095	-00.003	-0.0099	0.3794	0.3794	0.3781	0.0232	-0.0641	0.0033	-0.0013	00.925	038.56	065

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1. Simon, E.H. Static Stability Tests on a 0.098 Scale Scout Derivative Model in the Mach Number Range of 0.6 through 5.0. CVC Report 2-59710/2R653 dtd 18 Jan 62.

2. HSWT Staff. High Speed Wind Tunnel Handbook. CVC Report AER-EIR-13552 dtd Sep 62.

3. Wolfe, J. A. Data Reduction Procedures for Typical Force Tests at the Chance Vought High Speed Wind Tunnel. CVC Report AER-EOR-12978 dtd Jun 60.

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Unclassified Report

The purpose of the tests performed in the Chance Vought high-speed wind tunnel was to obtain force data to evaluate the static stability characteristics of the SLV-1B with 4-square-foot fins. The model was instrumented with a six-component internal strain gage balance and two base pressure probes to determine the forces on the model. The model was then placed in the tunnel and tested in the Mach number range of 0.6 through 5.0, and a Reynolds number range of 6 million/ft. to 20 million/ft. The model attitude was varied

1. SLV-1B--Stability
2. Pressure testing
3. Space vehicles--testing
4. Strain gages
5. Wind tunnel testing

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